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Editorial Cabinet

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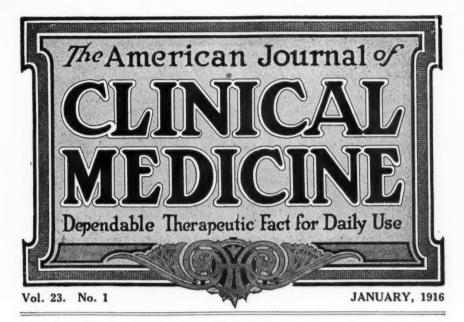
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Another Year

A HAPPY NEW YEAR!

We wonder how many resolutions will be breathed into the oft-repeated expression of this greeting during the next few days. We wonder yet more largely how many such resolutions will be forgotten and broken before the year is a month old. Not that we are cynical—bless our editorial heart, no! Nor is the smile that lurks on our lips even a pitying or pathetic one. It is only the complacent, knowing smile of the philosopher.

Even the five-year-old (who, by the way, knows nothing of resolutions) has already perceived, in elementary fashion, the philosophic truth that lies behind our superior smile. One of these tots, after a (for him) long stretch of silence the other day, announced the profound axiom: "When you're borned, you're borned, and you can't be borned any elser."

There you have it!

There will, let us hope, be some improvement in our lives in the coming year. Heaven knows, there is room enough for it. Not, however, because we make resolutions, but because time and experience and the sense of life slipping away will mellow us. But in the main we shall stumble along in the same old way, blundering, sinning, planning, and

forgetting, but on the whole doing the best we know how.

We may be sure of one thing, however. There is this note of fatality in the youngster's discovery. We must tread the path that the New Year stretches before us, and every succeeding year, until we reach the turn where "the Shadow sits and waits for us."

As the child quaintly said, "When you're borned, you're borned."

It is like buying your ticket and entering the car of a "dip-the-dips," "loop-the-loop" scenic railway. You must go the rest of the trip. No matter what bumps, and shocks, and hair-raising twists you may encounter, there is no getting out of the car until the end is reached. You can only shut your teeth, and clench your hands, and hold tight to the car, and go the route—unless, indeed, you are tipped out by a smash-up, and even that you cannot forestall or prevent. It's a great game—this life of ours!

We fear we may be laying ourselves open to the criticism of treating a solemn subject with levity, if not with frivolity. Well, perhaps we are. It's a case of reaction. We were impressed with the weight of the task and the gravity of the conditions under which the New Year dawns, to write a serious

editorial befitting the situation. But the very solemnity of the thing oppressed and crushed us, and for sheer escape we turned to

the lighter aspects of life.

Happy thought! Why not make a New Year's lesson out of this very incident? A common fault of us physicians is that we take life too seriously. We are a little better in this respect than we used to be, since organization has brought us into social relations with each other. But we are still burdened with it. We worry unconsciously, and carry too much responsibility.

One of the most helpful lessons life can impart to us is to do our work as well as we can and then let the results take care of themselves. How often have all of us been amazed to find things come out much better

than we anticipated!

Napoleon used to leave his mail unopened, so they say, for a month at a time, and then found that the majority of the letters had answered themselves. A trifle extreme, perhaps, but still evincing a lot of good sense. The great unseen power that guides our lives through a wilderness of trial and tribulation will also guide our ship through the fogs of difficulty and perplexity, safely into the desired haven. To change the figure into the beautiful imagery of Bryant,

He, who, from zone to zone Guides through the boundles sky thy certain flight, In the long way that I must tread alone

Will lead my steps aright.

The one plain duty of every man is to face the future as he faces the present, regardless of what it may have in store for him, and turning toward the light, as he sees the light, to play his part manfully, as a man among men.—Theodore Roosevelt.

WHAT SHALL THE DOCTOR READ?

The man who does not move forward and upward moves backward and downward. There is no such thing as standing still, for any human being. Tell me what you read, and I will tell you what you are becoming. However, there is so much one should read, so much that one must read, that the choice is becoming a difficult one.

Doctor must read the newspapers, local as well as metropolitan—he must know what's

going on.

Doctor must read the magazines, some of them—he must know the trend of human thought and progress.

Doctor must read medical periodicals, special and general, and such of the new books as most subserve his needs in his special line of work.

Besides these, he must read ahead—must add to his store of general information; for, the community must look up to its medical adviser as the authority on all manner of subjects; and it is to his advantage that he cultivate this sentiment.

But how is a general practitioner to find time for all this enormous amount of reading and, yet, attend to practice, keep an eye on his interests, collect his fees, and occasionally even devote an hour to his family? The doctor religiously inclined also wants to go to church occasionally; although this should be considered an entirely voluntary rather than an obligatory part of his life, because of the very nature of his vocation. Here is the plan adopted by the present writer—it works well with us, and it may serve some of you:

Invest in the latest and best cyclopedia, and take a volume to bed with you; look over the articles, skipping judiciously, and read the items that chance to interest you. Somewhere you come upon something that opens a subject in which you are more especially interested, and you may feel impelled to secure works devoted to it and in this way to pursue the subject further. The matter may be something that at the time is agitating your community and upon which you are almost sure to be questioned; or it may be a matter about which you will be able to give valuable enlightenment to a friend.

The cyclopedia is, in effect, an index to information, and if one treats it as such the general knowledge obtained from it, added to that more extended information gained from the special works suggested, will go far to make a man justly credited with being well

informed.

Outside the purely medical reading, the one thing the doctor must understand thoroughly is sanitation—personal, domestic, municipal. The doctor must know more about this than anyone else in the community, and be prepared to advocate and direct it at all times. The profession, as a class, should consistently push toward the position of advisers of the people, in all that pertains to the prevention of disease and the prolongation of life—a useful, enjoyable life. The future of medicine lies right here; and he who appreciates this fact and directs his steps in this direction will find himself on the right road, and ahead of his fellows.

We have been preaching this doctrine for many years, and it is with pleasure that we see how so many are taking up the cry. We see in this the only right solution of the evils besetting the medical profession—poverty, lack of appreciation, unlawful and unwise competition. We are waiting patiently for the body of our fellows to take up this problem and put it into practical operation.

There is no doubt whatever of the fact that the proximate principle is here to stay and that the isolation of these substances has advanced therapeutics wonderfully. Modern pharmacology will be the basis for prescribing by the on-coming generation of physicians, and modern pharmacology deals largely with proximate principles, the employment of which is destined to grow as exactitude in prescribing grows.—Dr. Thomas S. Blair, in "The Medical Council."

EDWARD LIVINGSTONE TRUDEAU

Whenever I think of tuberculosis—I mean, of course, whenever I think of it in its broad, human relationships—I think of three men who, because of their valiant fight, not so much against the terrible disease as in the teeth of it, have always inspired me with a devoted hero-worship. These men are Robert Louis Stevenson, Henry C. Bunner, and Edward Livingstone Trudeau.

These men looked continually into the face of death with a smile on their lips. They lived cheery, busy, useful lives, albeit much of their activity was directed from a sick-bed; so that there is left to the world only the memory of their strength, and not of their weakness. Two of them, Stevenson and Bunner, chose to ignore their arch enemy. They were both literary men. Neither in their private nor in their public writing did a single reference to their affliction escape them. They both gave to the world a genial, wholesome humor, and died, at last, with the smile on their lips.

Trudeau chose another course. He elected to make a deliberate and heroic fight against the disease that attacked him, both in his own behalf and in that of others. He bravely turned his own misfortune into the occasion of a public crusade against disease and death. He has generaled the modern forces of the antituberculosis campaign.

Stevenson and Bunner died several years ago. Trudeau outlived them—a tribute to the effectiveness of the warfare that he waged. Many and many a stricken man and woman could bear testimony to its effectiveness, too. Death has claimed him at last. In a sense I suppose it may be said that tuberculosis got him in the end. If the enemy can get any doubtful satisfaction out of such a questionable triumph, he is welcome to it. The verdict of the world will be that the triumph lay with

Trudeau—physically, for he lived, happily and usefully, more than the average span of human life; morally, for he led the way to a final conquest of the foe. "He has fought a good fight, he has finished the course, he has kept the faith; henceforth there is laid up for him a crown of righteousness, which the righteous Judge shall give him in that day."

CARDIAC STIMULANTS

Heart stimulants are remedies that rapidly increase the force and frequency of the pulse when depressed. They are employed to prevent or to relieve failure of the heart's action, in syncope or shock, as a consequence of emotion, trauma, cardiac sedatives, snake poison, febrile conditions, or other maladies. Among the leading agents of this class may be mentioned the spirit of ammonia, alcohol, atropine, ether, chloroform, camphor, and aromatic volatile oils. Important physical measures are: heat or cold or counterirritants, applied over the heart.

Brunton attributes most of the effect of alcohol to its direct stimulation of the mouth, throat, and stomach. Hence, to secure this effect, it should be given in concentrated form. More powerful local irritants have more cardiostimulant action. The Hindus have a saying that in conditions of profound depression it is necessary to bring the tears into the eyes in order to break the shock of the initial stage of dysentery, cholera, and other violent tropical seizures. Accordingly, they administer pungent combinations as, for example, equal parts of chloroform, camphor, tincture of capsicum, oil of cajuput, with 4 parts of ether, taken, undiluted, in teaspoonful doses. This mixture accomplishes the object quite surely, much more effectively than does pure alcohol or any of its preparations, provided the patient can swallow it.

Ether and chloroform merely are stimulant in the same manner; that is, by local irritation; and the latter only in small doses.

Ammonia acts like alcohol, but also by stimulating the vasomotor center. In treating snake bite, water of ammonia has been injected into the veins in 1-2-dram doses. The stimulation is immediate, but evanescent. The same medication has been employed to resuscitate persons apparently dead, and it even has prolonged life for a period sufficient for the dying patient to finish important business.

Brunton's guide as to the use of alcohol is, that its effect is to be judged by its action upon the circulation, to wit: if alcohol brings the circulation nearer to normal, it is beneficial; if not, it is deleterious. So, alcohol may slow an excessively rapid heart or accelerate it when too slow; also, it may render a small, soft, compressible pulse larger,

fuller, and more resistant.

The application of camphor as a heart stimulant is limited to these conditions: fevers, with a tendency to failure of the circulation, as in the typhoid group; the eruptive fevers, with delayed or retrocedent eruption; asthenic forms of pneumonia, and the typhoid state when appearing in any malady. Camphor now generally is administered hypodermically in oil solutions, although it acts more speedily taken internally in concentrated form, as in the mixture, quoted above, used by the Hindus. effect is more sustained than that of alcohol or ammonia; however, the local irritation may eventuate in active inflammation, while large doses may occasion grave irritation of the urinary tract.

The volatile oils resemble camphor in their action as well as in their dangerousness in

overdoses.

In capsicum, we have the maximum of local stimulation with the minimum of dose. The old Thompsonian "Number 6" (tincture of capsicum and myrrh) was a safer and more effective stimulant than any of the foregoing, and it has no superior, if an equal, among our modern agents. Even for the purpose of breaking up or preventing a cold after exposure to cold and wet, a cup of hot capsicumtea is the best remedy at our command. It is the ideal stimulant, by virtue of usually being immediately obtainable, acting quickly and powerfully, and leaving no bad aftereffects; while it also is applicable for any accessible diseased mucous membrane and of the skin. In the form of the oleoresin, more stimulant can be carried in a dram-vial than in a gallon-jug of whisky.

One of the most powerful cardiac stimulants is heat, whether applied by way of the stomach or to the surface of the body. The hot-water-bag has replaced the ancient poultice and the numerous objectionable oldtime medicaments. When the temperature, that has overstimulated the heart, falls rapidly, the hot application over that organ may prevent or check the tendency to collapse.

The application of cold over the heart powerfully stimulates its action; however, the influence is of brief duration, while the continued application depresses. Frigotherapy at best is a laboratory method rather than a clinical one, to be resorted to in an emergency, when there is no time for other measures, but quickly to be replaced by remedies of more enduring action.

Pain is a powerful stimulant. Threatening chloroform narcosis has been interrupted and life sustained by the forcible dilatation of the anal sphincter; opium-narcotism has been held off by pushing a sharp blade under the finger-nails.

A stimulant is a remedy that, acting instantly and powerfully, arrests the fall of vitality and arouses the failing powers of the system, especially of the cerebral centers. It is merely a whip and necessarily must be followed by measures calculated to ensure a continuous restoration of strength, that is, tonics and nutritives.

The passions have been utilized thus; and the spirit, pluming its wings for flight into the Hereafter, has been called back to earth by the sudden arousal of love, duty or

jealousy.

There's a good time coming, boys, A good time coming.

War in all men's eye shall be
A monster of iniquity,
In the good time coming.

Nations shall not quarrel then
To prove which is the stronger;
Nor slaughter men for glory's sake—

Wait a little longer.

—Charles Mackay.

LO, THE POOR CONSUMPTIVE!

To the practitioners in the resorts patronized mostly by the tuberculous, we rightfully look for expert information concerning tuberculosis and its victims—and we generally get it. Not all men—including doctors—are clear as crystal in their transmission of the facts presented to their mental view; often they communicate their own color—blue, green, red, yellow—while any ocular or mental shades they may be possessed of are likewise imparted to the verbal pictures they thus present. Many a gloomy prognostication is founded, not so much upon the ominous condition of the patient, as upon the doctor's need of a liver-pill.

To all of which we find a notable exception in Thompson Frazer's article in *The Charlotte Medical Journal* for November, 1915. It is entitled, "What the State and You Can Do for the Consumptive." The "you" is particularly refreshing in these days, when so many are asking the State to do all but chew their food for them, while they themselves

lie back and take their ease. There may, after all, still be found a remnant of the old pioneer stock, that could take its own part and needed no help or supervision, nor asked for it. Doctor Frazer writes from Asheville, where he surely has abundant material for study.

Specifically, Doctor Frazer calls upon the State to care for the indigent consumptive. Poverty is one of the essential factors in the etiology of tuberculosis, as this disease occurs most frequently among those who can not afford fresh air, sunlight, dry and warm dwellings, good food, not to mention all the other sanitary prophylactics. These indigent consumptives are the greatest peril to any community, and it is worth while for every healthy citizen to aid in removing this threatening menace against his own health. One may be working in office or shop with the tubercle propagator, may be drinking milk from a consumptive's cows, one's children may sit in school beside the infected child of a tuberculous parent; in truth, the perils from all other infectious maladies taken together do not equal those from the tubercle-carriers.

Tuberculosis is readily curable in the early stages; however, the treatment is costly and the poor can not afford it. There are too many consumptives for private benevolence, and the danger is so universal that general prevention alone can cope with it. Were we to provide for nineteen consumptive children in a given school, even then the twentieth, if neglected, might infect the

other healthy pupils.

To the State, Doctor Frazer specifically assigns the following duties: (1) The maintaining of a free dispensary, where the diagnoses may be made early; (2) maintaining a sanitarium for treating the poor in the early, curable stages; (3) providing school inspection and fresh-air schools for children below par; (4) providing a whole-time qualified health-officer who is to look to the enforcement of the law; also visiting nurses, and a hospital for advanced cases; (5) exacting compulsory notification by physicians.

Considering the danger to the public from these cases and their inability to pay for the expensive treatment necessitated, these demands are no more than can justly be asked of the community. The only alternative seems to be, to adopt the open-air method and turn the creatures out, to live or die, as the

powers above may determine.

This leaves important duties to the individual: To give moral and financial support to the State in the fulfilment of its part; to

do each his share in combating the evils of poverty that render tuberculosis so prevalent and fatal, by seeing to the enforcement of child-labor laws, factory inspection, and living-wages for the laborer, such as will enable him to provide the decencies of life for his family; to organiz antituberculosis societies; to contribute to the care of those who can not care for themselves.

This means something more than dodging one's taxes, slipping a "V" to the inspector, to induce him to ignore the ventilation and light restrictions of building-authorities, going into the open market and buying labor so cheaply that men must herd together like rabbits, to live on their earnings, cutting taxes for schools so closely that warmth and ventilation can not be supplied to the kiddies, or in other ways treating the community like a business competitor, who is to be "skinned" to the limit.

When the practice of mankind shall have attained to the level of its knowledge, when its art ranges itself by the side of its science, then we shall see the end of preventable maladies, and then, also, there will be material for new diseases or for wars bigger than the

"crime of 1914."

Sachs comes in with a telling presentation of the "responsibility of the city," in a contribution to The American Journal of Public Health for November, 1915. He asserts that the trend everywhere is toward a gradual supplanting of the enthusiastic pioneer work of private antituberculosis organizations by the more comprehensive, more correlated system of control of the disease by efficient municipal health-departments. Efficiency calls for concentration of effort and authority. The problems include hygiene of streets and alleys, freeing of the air from smoke and dust, extending vacant spaces between buildings and converting them into parks and playgrounds, building-regulations for dwellings, schools, public buildings, and shops, and systematic supervision of schools and children. He concludes:

"In the further development of the present arrangement for the control of tuberculosis, municipal health-departments must gather strength, be given funds, and acquire the support of the medical profession and the people at large, in directing a campaign against this most widespread disease of modern times. Efficiency calls for united effort, with centralization of authority. The spirit that makes possible the country-wide effort of private organizations must finally find its expression in the enthusiastic support given

to modern health-departments, in full accord with their enlightened communities."

The North Carolina Health Bulletin names the following facts, signs which everybody should know:

"Your chances for recovery depend upon an early diagnosis.

"A hemorrhage from the lungs means tuberculosis, without exception.

"A morning subnormal temperature, with afternoon rise, means tuberculosis, 99 times out of 100—and probably in the 100th case."

"A low blood pressure is suggestive of

tuberculosis.

"A cough lasting more than three weeks should suggest tuberculosis and cause resort to a physician.

"The tubercle-bacillus in the sputum is a positive sign of tuberculosis, but the diagnosis should be made before this can be found."

That Michigan is awake to the importance of this matter, is evidenced by the state legislature's appropriation of \$100,000 for two years' work in the prevention and eradication of tuberculosis. Ourdoor Life suggests that this sum be utilized in a survey and study of the situation, and an extensive and intensive educational campaign.

Write it on your heart that every day is the best day in the year. No man has learned anything rightly until he knows that every day is Doomsday.—R. W. Emerson.

LOBELIA AND ITS ALKALOID

Since Samuel Thomson introduced the Indian-tobacco as a remedy, this American plant-drug has been a mainstay of his successors and of the better educated disciples of the botanic "schools" that followed after them-and, naturally, the bete noir of their opponents. This opposition sentiment happily has died out-we live in the present, and are not disposed to trail about with us the antagonisms and absurdities of the remote or recent past. Still, the profession is sharply divided as to the merits of lobelia, as between those who, using it habitually, rely upon it as a most valuable remedy, and those who, never having employed it, look upon it as useless or even dangerous.

A physician of the "big" school, a friend of ours and a man who enjoys the respect and confidence of his colleagues, has presented his views on lobelia, with a sequence of opinions thereon collated from the literature of the century. Dr. C. W. Hunt makes this presentation in the current issue of *The Charlotte Medical Journal*. Quiet and sensible, with-

out overenthusiasm or that determination to condemn which spoils most of our investigations of drugs fathered by outsiders, Doctor Hunt's paper is at once a valuable contribution to the subject and a model of what such papers should be. He calls himself an optimist, having faith in his remedies, and adds: "Faith born of careful study will not be disappointing when coupled with proper diagnosis and application." Surely. Following are several more quotations from his essay:

"1858. Wood: Pseudomembranous croup. The internal use of lobelia is here highly

serviceable."

"1868. Stillé: Elliotson writes that it is the best medicine for spasmodic breathing. Bower says, in all cases where dyspnea is an urgent symptom, lobelia is applicable. Neuman terms lobelia one of the most valuable medicines in diseases of the lungs, relaxing respiratory spasm with incredible rapidity, even when dependent on organic disease, as of the heart, with tormenting dry cough and insufferable tickling in the throat. Nothing approaches the action of lobelia, direct and specific, upon the motor respiratory nerves. It is speedier and more certain than digitalis, more direct than ipecac."

"Schlesier, Andrews, Morelli, Tott, and Erble confirm these encomiums. But Flint, in the same year, stated that lobelia was not

prescribed."

"1880. The lecturers at the P. & S. College of Baltimore pronounced lobelia depressing, unreliable, and too irritating; the sole use suggested was as a local application for rhus

poisoning."

"1883. Bartholow, who drew largely on the work of the Cincinnati group, confirmed the foregoing recommendations and advised lobelia for impactions, intestinal atony, hernia, and intussusception, by enema. He still found it harsh and dangerous, but thought it might find place in treating tetanus and strychnine-poisoning. Ott now investigated the alkaloid lobeline and defined its activities. It first increases vascular pressure, by exciting the peripheral vasomotors, followed soon by a fall, the heart weakening, the peripheral circulation embarrassed and the lungs obstructed, so that oxygenation is rapidly impaired and the temperature falls; the action centering on the motor nerves, especially the medulla and the respiratory center, the nucleus of the pneumogastric."

"Biddle followed Flint, but Ringer used lobelia in large doses as a remedy for respira-

tory spasms."

"1889. The U. S. P. dilates especially on the effects of toxic doses, but repeats the

uses for spasmodic maladies."

"1897. Waugh: Finds the alkaloid less apt to induce nausea, stimulant to digestive tract, irritating in overdoses; expectorant, laxative, diaphoretic; suggests small and repeated dosage, to increase the activity of vegetative functions, innervation, and circulation, in minute doses; for angina pectoris, full doses, also for rigid os or perineum; small doses energize uterine contractions; as sedative, in fevers and local inflammations. Here we have the first intimation of the all-important differences between small and maximal doses. The previous unfavorable views were based on toxic dosage."

"1906. Shoemaker: Repeats the effects of large doses; notes the diuretic and narcotic actions; but draws the line, with lobeline, between the small- and large-dose effects; he warns against its use in cardiac dyspneas; quotes Nunez' eight cures of tetanus, and introduces the hypodermatic use of lobeline."

As we have remarked, those who have not made themselves familiar with lobelia dread its violence and term it too dangerous for use. As with aconitine and veratrine, these fears subside after better acquaintance. There is less reason for them than with antimony, which adds a serious peril from local irritation; and far less than from mercury, which entails later dangers, besides. Doctor Hunt, a respected member of the dominant school, has made himself familiar with lobelia, and he

has this to say of it:

"I consider lobelia the kind of antispasmodic regulating the circulation, like aconite and veratrum; actively antispasmodic, like tobacco its nauseant effect guarded by opium, if too depressing to the heart, adding cactus . . . lessening the force of the heart in full doses without slowing its rate I have prescribed it in small, medium, and very large doses, and I have never witnessed a violent or dangerous effect. Lobelia, like aconitine, antagonizes the febrile process, lessens respiration, especially in mucous inflammations, where its secretion stimulus is shown ideal for spasmodic colics or for an overloaded stomach, given to emesis; tonsillitis, acute pharyngitis, tonsillar ulcer, asthenic diphtheria, acute catarrhs, catarrhal bronchitis, pneumonia, overaction of the heart, peritonitis, puerperal metritis, cerebrospinal meningitis, acute maniacal delirium, active cerebral congestion, neuralgia, ovarian congestion, rigid

os uteri and perineum, asthma; and in puerperal eclampsia with the H-M-C tablets."

This shows the wide range of application for this remedy in the hands of a man who knows it and can handle it as a good carpenter does any sharp-edged tool.

DOCTOR REGISTER AND HIS JOURNAL

Dr. Edward C. Register has been elected president of the Medical Editors' Association for the coming year. Doctor Register, as editor of The Charlotte Medical Journal, has given us a fine example of what can be made of a local periodical. Issuing from Charlotte, the journal covers the Carolinas, the Virginias, Georgia, and eastern Kentucky and Tennessee. It is supplied with articles contributed by the physicians of this sectionthe November number containing seven contributed by North Carolina physicians and one by a Virginian. A large part of the advertising is also from local interests. In point of quality, the reading pages compare favorably with those of any journal from the "great medical centers." The material as a whole is instructive, interesting, up to date, and clean. Altogether, Doctor Register has fully earned the honor conferred upon him.

I do not ask for more to seek and love me,
I do not ask for brighter eyes to move me,
But sharper sense, to miss no hailing sign
Of fellowship in spirit seeking mine.
No golden shore I seek. but a heart that sings
The exquisite delight of common things.
The kingdom of heaven is not there, but here—
Oh, for the seeing eye and hearing ear!
—Frank Crane.

ARRESTS OF PHYSICIANS UNDER THE ANTINARCOTIC LAW

Two Chicago physicians have recently been arrested for violations of the antinarcotic law, and one of these was tried and convicted. This man, it was shown, had written thousands of prescriptions for narcotic drugs. We have not had an opportunity to review the evidence in his case, having been compelled to depend for information upon the newspaper reports, but it appears that he had become the source of supply for a great many victims of the drug-habit. Nevertheless, this physician claimed that he was treating these patients by the withdrawal method; that in many instances he received no pay whatever; and that his office was simply thronged by hundreds of poor wretches who appealed to him for relief. He believed, he avowed, that he was doing a righteous

work. However, the wholesale way in which he wrote prescriptions for those people was enough to arouse suspicion on the part of the authorities. The punishment given him by the court was very severe. He was fined \$2500.00 and sentenced to five years in prison. Apparently his conviction was just.

The other physician was a man of excellent reputation, whose story was told by Dr. J. V. Fowler, at a recent meeting of the Council of the Chicago Medical Society. We quote his remarks, as printed in *The Bulletin* of

October 16:

"The doctor was visited first of all by a patient who was a drug-fiend, and who was suffering from the effects of the withdrawal of the drug. The doctor was urged to take the case. At first he refused and tried to get the man to go to some institution. The man made excuses, saying that he couldn't go at the present time and wouldn't go to the County Hospital, but stated that, if he could only get on his feet for a while, he could earn enough money to take the treatment. The doctor gave him some morphine, which he recorded. The man came the second time, and this time the doctor cut down the amount of the drug so that he had a smaller amount to last a greater length of time.

"Later on, possibly a week, a lady appeared, representing herself as the patient's wife; she stated that he was very much better and had almost dispensed with the use of the drug. She described the man, told his address, and the like, and, the doctor gave her a small bottle of a weak solution of codeine, but told her not to let her husband know it was a weaker solution; also told her not to come again, as he would not give her any more, stating that her husband must come. She came again about a week afterwards, stating that her husband could not come, and he gave her another still weaker solution. In a few minutes, there appeared a couple of detectives and locked him up.

"His wife telephoned me. I found he was booked for 9 o'clock the next morning. I immediately got busy and did everything I could to get him out of jail, but all to no purpose. When the case came up he was discharged. A reputable man was thrown into prison, without any charge for any crime; no friends could see him or learn anything about it, except that he was locked up. He was held in jail over night; and the papers published it broadcast. His reputation is affected to such an extent that possibly he will never live it down. And all for what? Nothing! It is time that we were putting

our shoulder to the wheel and stopping such prosecutions. We are in sympathy with the purport of the law and we are all anxious to catch the violators of the law, but to throw a man into prison on suspicion alone is not a thing that should be allowed to exist. I hope this Council will take action in this matter when it comes up for action."

We bring these two cases to the attention of readers of CLINICAL MEDICINE, so that they may understand the importance of making themselves conversant with the provisions of our narcotic legislation. Last month we printed some of the recent federal regulations.

For the man who deliberately traffics in narcotic drugs merely for the sake of making money, and without thought of the welfare of the poor unfortunate people who are made to suffer by it, we have no sympathy whatever; nevertheless, we must protest against the enforcement of the law in such a way as to hamper any physician who is trying honestly to relieve suffering.

As we have said in the past, there is no reason why any physician should feel alarmed about this law. Whenever the doctor has a legitimate use for a narcotic drug, he should so use it, just as he has always done in the past; however, he should give it intelligently, make the records required, and obey all of the law's provisions with the utmost care as to detail. Under no circumstances should he allow himself to become a regular source of supply for persons using narcotic drugs improperly. Addicts should be treated by the doctor in person, and never through the intervention of a third party.

Any physician who will take such care will never get into trouble.

The first three or four men who come to mind who have acquired wealth in the practice of medicine are not spectacular, and have not cared whether they acquired wealth or not.—Robert T. Morris.

THE RELATION OF CONSTIPATION TO VARIOUS DISEASES

Half a century ago, the great Jean Martin Charcot declared that "ninety-five percent of all diseases have their origin in the digestive tract." In his day, and from his standpoint, of course, this assertion was a purely empirical inference, drawn from continuous clinical observations, and whatever weight it had was derived from the personal authority of the man who uttered it. Several years later, Charles Bouchard, doubtless following out the ideas of Charcot, with whom he was early associated, carried out an extensive investi-

gation of the influence of the condition of the gastrointestinal canal upon bodily health, applying to his researches what were in those days scientific methods, and, as a result, enunciated his famous doctrine of gastrointestinal autointoxication, which latter term he coined.

Both of these men's teachings received a great deal of attention at the time of their publication, and bade fair to furnish the key to many obscure problems in medicine. These teachings, in fact, represented the rational, scientific exposition of the concept of disease, which up to that time had held the field rather vaguely; and they may be regarded as the climax of the earlier stage of modern medicine. The "humors" and "diatheses" of the older school received a definite and intelligible signification in this newly announced phenomenon of absorption and intoxication from the gastrointestinal sewer. Both theory and experience seemed to confirm the doctrine; it gained general currency; and the therapeusis to which it gave rise justified it.

With the discovery of the microorganism and the demonstration of the important part played by bacterial infection in the production of disease, there came a revulsion of professional opinion and sentiment. Everybody rushed to the microscope and the culture-tube, and in the stampede Bouchard's doctrine of autointoxication was swept aside

and contemptuously discarded.

Nevertheless, it is worth remarking that even in this recoil and up to the present day medicine never really lost the impress made by the teaching of Bouchard. The cleaning out of the gastrointestinal tract never ceased to be a prime factor in the treatment of disease; nor has there ever been wanting, during all the intervening period, faithful and influential advocates of Bouchard's views. But, to some extent, the advent of the doctrine of bacterial infection and the prevalence of all the views and practices to which it gave rise temporarily eclipsed his teachings and prevented the investigation and elaboration which they deserved.

Among those who continued to believe in the importance of gastrointestinal autointoxication and to shape their therapeutic principles and practice by it, we humbly (and, yet, with considerable pride, too) point to ourselves. In season and out of season, we have not ceased to preach the therapeutic doctrine of "clean out, clean up, and keep clean," as being an elemental principle in the effective treatment of disease. We have stoutly maintained, often in the face of opposition and ridicule, that intestinal toxemia is the fons et origo of many otherwise obscure disorders, and that even where the pathologyin-chief was a bacterial infection, or something else, the absorption of intestinal toxins created a vicious circle that aggravated the disease and hindered, if it did not prevent, recovery.

At last it seems that Charcot's and Bouchard's position-and our own steadfast adherence to that position—is to be justified by present-day confirmation. The psychology of the medical scientist apparently is not very different from that of the man in the street, after all. It needs that a perfectly obvious truth, which anyone with eye might see for himself, shall be uttered with the force of some popular personal authority in order to be recognized and become current. With that, however, we shall not quarrel. We are only too gratified to see that the truth is coming into its own, by whatever channel it be.

To Sir William Arbuthnot Lane, the English surgeon, must be credited this modern rehabilitation of Bouchard's really epochmaking doctrine; and, largely because of Lane's prestige and influence, many other able men have lately given considerable time and attention to the subject. To be sure, it has been approached from a somewhat different angle: from the surgical rather than from the medical, the anatomical rather than the functional. But, in the ultimate result, it is all one. For, if kinks in the bowel and intestinal stasis bring about bodily disorders, it can be only by reason of intestinal toxosis in its broadest intent.

From the theoretical standpoint, the recent work of Arthur Keith tends to emphasize the functional aspect of the matter; while from the clinical angle the observations and investigations both of surgeons and internists in our own country as well as in England, are slowly, but surely, establishing an unmistakable relation between constipation and various diseases in which such relations have

heretofore been unsuspected.

It is not for the mere purpose of saying "I told you so" that we call attention to this important subject, but to make a renewed plea, in the light of this modern awakening, for more and more consideration of the intestinal canal as a positive source of mischief in many disease-conditions and a potential cause of trouble in many others. The work of Lane, Keith, Reed, and others gives a new significance to the plea that we have been making for the last twenty-five years, "Clean out, clean up, and keep clean"; and it suggests a large field of clinical research—in which we urge our readers to take part—into the causes and effects of constipation as an important factor in disease.

If man had never been hungry for woman, and if woman had never been hungry for man, none of the finer traits of human character could have been developed. Love, art, music, poetry—in short, all of the finer qualities that have gone so far toward making life beautiful, could never have existed.

-Lee Alexander Stone.

THE PATIENT OF MODERATE MEANS

We have long been of the opinion that the present method of dealing with persons of small means who are the victims of obscure illness is unsatisfactory. Patients of the poorest class can secure expert examination and advice by entering a large hospital, where they have the benefits of consultation with different experts. Wealthy persons can employ the services of numerous experts to determine their ailments, by paying large fees for such information. Persons of limited means, however, can neither expect to be treated as paupers nor afford to pay for numerous expert opinions. As the situation stands at present, therefore, most of these unfortunate patients are cut off from the best of modern scientific medicine.

This is a situation which must have impressed every practitioner. In a general way, we feel that the matter of dispensary service is not on a proper basis. We have always felt that in offering himself for clinical demonstration a patient was tendering more or less of a quid pro quo for the medical or surgical service that he received, rather than availing himself of any species of charity, and that the restriction of such service to those unable to pay for it is fundamentally

wrong.

To be sure, such a proposition is open to the objection that it would tend to bring about an abuse of clinical advantages, and an injustice to the practicing physician. Perhaps it would; but we doubt it. As the matter stands today, there are large numbers of people receiving clinical attention who could afford to pay a moderate sum to a doctor, and a still larger number who, under the present system, will not submit themselves to the clinic who are really worthy of it, and whose cases would serve the cause of medical education admirably.

It is, of course, right that the indigent should receive the prime and full advantages

of clinical service; and it is equally right and proper that those who can afford to pay for medical service should do so. But we see no reason why either of these principles need be violated when the person of moderate means is given a share in the scientific advantages of the day at less than the usual rates. Why may not a person of this class be permitted to pay a small or moderate fee for his attendance or his operation, with the additional understanding that if he permits his case to be demonstrated in teaching, this service, on his part, will be counted as making up the balance of the fee required by the hospital and the expert? By such an arrangement, all the objectionable element of charity would be eliminated from the situation, and the patient of small means could secure all the advantages of modern clinical skill if he chose to avail himself of them.

This is one way of remedying the situation. Another way is the plan described in our editorial pages in October—for physicians to group together and act in concert. Surely, in every community of any size there can be found a number of men engaged in special lines of practice who would be willing to cooperate for the benefit of the patient with moderate means, without loss to themselves

or hardship to the patient.

IS AGE A PREVENTABLE DISEASE?

The man who questions popular beliefs is a hero and deserves the plaudits of his fellows. While their associates exclaimed against the impiety of those audacious spirits who first asserted that natural phenomena, such as lightning and storms, were not manifestations of divine anger, that arrow-heads were not thunderstones, and that sea-shells found on mountain tops were not created there, but evidenced the one-time presence of the sea, they stirred the slumberous depths of human thought and set the world moving forward.

Our gratitude is due to Metchnikoff, in that he, among the first, questioned the inevitableness of senility and asserted that it, like other diseases, might be prevented. Whether the Bulgarian bacillus be really an effective agent in this work, is of less moment than the impetus he gave to investigation along a road hitherto believed to be closed.

A century and a half ago, a great Dutch physician—Hufeland—published a work on the art of prolonging life. Hufeland is almost forgotten now, his name lingering only as a purloined disguise for a brand of bad whisky spoiled by some bitter ingredient; but he was the foremost savant of his time. His book was translated, a century later, by Erasmus Wilson, who then found nothing that could be added to it, with advantage.

In The Medical Summary, Doctor Terry, exsurgeon general of the New York State National Guard, contributes an article that may be taken as expressing the current views on this topic. Terry prescribes a morning hot bath, with massage, "unloading the tissues of the structural changes incident to metamorphosis"; then a quarter-hour of calisthenics; two bowel movements; rise immediately on awaking; prevent arteriosclerosis by avoiding overfeeding, balancing supply and demand; diet suited to the needs in quantity and quality. The bodily requirements should be met by a diet of fruits, cereals, vegetables, nuts, and sea-food; excluding red meats, beef, sweetbreads, pork, ham, and sausage. He does not place milk in either list, but we presume it should be permitted; and, if so, taken in any form that is most palatable, with preference for the sour varieties-buttermilk and clabber, leaving the bacillus Bulgaricus for debate. The system has its value, but does not seem to reach the merits of the question.

Metchnikoff's proposition embraced two points—the dependence of the changes incident to age upon intestinal toxemia due to specific microorganisms, and the opposition to these waged successfully by the bacillus bulgaricus. To a certain extent, we feel disposed to consider the former as probable, the latter as possible. But we do not accept the idea that this covers the entire ground, nor that autotoxemia accounts for all the

phenomena of age.

Take the mechanism of the condition known to us as sclerosis or cirrhosis: we have the afflux of blood following exercise, inducing an exaltation of the functional activity of the specific cellular elements of the part, as we see in the stomach after taking alcohol. But no irritant can make a cell; and the development of any tissue by exercise has its The muscles of the athlete develop limits. just so far, while continued effort only results in spurious hypertrophy, the hyperplasia of the connective-tissue elements. But this is not limited to the athlete or the blacksmith, it goes on in every human being; and, as age advances, his muscular tissue is gradually replaced by the worthless connective tissue.

After a stroke of hemiplegia, it is the leg that soonest regains power; the arm later and less perfectly. This is because we must, and do, use the leg-muscles, while we are apt to favor the arm, so that adhesions are likely to form; and we have heard these giving way as a masseur manipulated the limb. No matter how little we use our arms, we call on our leg-muscles constantly; and the result is, that, as age advances, it is the legs that first weaken, the arms being compelled to aid them by the use of a cane. The resulting condition is fibrosis, hyperplasia of the sarcolemma, and atrophy of the muscle-fibers. This is the enemy we should seek to cope with.

Have we a remedy?

The nearest we have as yet is thiosinamin, which, with massage, has certainly some effect in inducing dissolution of redundant, adventitious connective tissue. Whether this can be applied here, is a matter for experimental investigation. But, even so, it does not restore the lost fibers; so that its application, to be effective, should precede the atrophy.

Nothing is worse than advice to take much exercise—this is precisely the thing that must hasten the aging-process. It is rest and conservation of the remaining muscular tissue that are indicated. Instead of long walks, let the exercise take some such form as sawing wood, which brings into action the arms, back, and especially the abdominal muscles, which latter are scarcely ever given

as much work as they need.

This matter of proscribing red meats has been carried too far. Now we learn that pellagra may be ascribed to the absence from the diet of these proteins. When shall we ever learn to be moderate and sensible? that in medio tutissimus ibis? that when we empty the bath we need not spill the baby?

Moderation in the use of nitrogenous foods is wise, and, as we lay aside the more active habits of youth, we may well limit such foods commensurately. But limitation does not signify total abstention; and common sense is a better guide than extremism.

Again we return to the admonition, to study our vegetable materia medica with the aid of modern methods. The detection of radioactivity in the Saratoga waters has furnished an explanation of their popularity, for which the analysis of their mineral content failed to account. The separation of hyoscine therapeutically from atropine is an advance comparable to the distinction between scarlatina and morbilli. The really scientific study of the active principles of plants has scarcely begun; and who can estimate or limit the discoveries that wait in this field?



PHOTO: UNDERWOOD AND UNDERWOOD

TEACHING WOUNDED SOLDIERS TO USE MAIMED MEMBERS

ALL KINDS OF INGENIOUS METHODS AND APPARATUS ARE EMPLOYED BY THE GERMANS TO REEDUCATE IMPAIRED MUSCLES AND CRIPPLED LIMBS. "FANCY WORK" IS FOUND OF GREAT VALUE



PHOTO: INTERNATIONAL NEWS SERVICE

RUSSIAN WOUNDED LEAVING WARSAW

DURING THE RETREAT FROM WARSAW, THOUSANDS OF WOUNDED RUSSIAN SOLDIERS WERE CARRIED TO PLACES OF SAFETY IN PEASANTS' CARTS OR OTHER EXTEMPORIZED VEHICLES, AS SHOWN HERE

Teading Articles

What We May Learn from the Great War

By IRA S. WILE, M. D., New York City Editor of "The Medical Review of Reviews"

EDITORIAL NOTE.—All eyes are turned to the East. Even in prosperous, contented, war-free America, we realize that the world is undergoing a great change, the meaning of which we cannot yet understand. In the unfolding of this great drama of the nations, physicians are more interested than most classes of people. Because this is so, we believe that every reader of "Clinical Medicine" will find stimulus in Doctor Wile's splendid interpretation of the meaning of the great struggle.

THE uneven veneer of civilization is badly cracked. Through warps and strains one may see the coarse grain of the props of European society. Beneath the gloss of literature, art, sculpture, painting, education, and industrial development is revealed man, in all his primal strength and glory. The physical attributes of mankind stand resplendent beyond the control of the restraining forces making for mental and moral development.

The goal of mankind has not been determined. Shall we learn through this war lessons that, pragmatically speaking, are to make for the betterment of mankind? The role of the prophet is less certain in its meaning than the martial roll of drums. The vigorous onslaughts of personal combat in the name of God, that glorified soldiers of the Middle Ages, have paled into insignificance in the light of the mass destruction characteristic of the man-made war now desolating sixteen nations. The brawn and brutality of the cave man has been intensified in the destructive forces working in this prolonged campaign of devastation. The saber, the bayonet, the sword, and the lance are secondary instrumentalities of war compared with the machine-guns, shells, and shrapnel.

The obsolescent cavalry and infantry warred on the earth. The lessons of this modern war must be sought in the deadly submarine, in the graceful and incendiary Zeppelins and armed aeroplanes and in the subterranean activities in the trenches. The ballista and battering-ram appear trivial devices now that cordite, melinite, and lyddite shriek through the air in their merciless journey. The Human Harvest, as David Starr Jordan terms it, is being reaped by the irritating, strangling, fear-inspiring chemicals sweeping over the land in a pestilential cloud.

No longer is the mailed hand bearing the deadliest weapon. Man's brain has raised to the nth power the death-dealing devices that make this European war a profound lesson in an infernal catastrophe such as non-combatants far removed from the scenes of strife are unable to grasp, contemplate or understand.

Gone are the wars of individuals. Gone are the chivalry and glamor of mortal combat. Chemistry, physics, geometry, trigonometry, and abstract science have come into their own. The slaying of thousands is the keynote of modern warfare. With military ravages on a colossal scale, with violent devastation, with indefensible destruction, with purposeful cruelties, the military mind conceives the majesty of the triumphal procession of the martial Moloch.

Future wars may devise means of defense against the soul-searing elements now employed. Science and invention, hand in hand, will create more powerful machinery, more deadly missiles and more forms of offense.

Can we learn the lesson of peace from the ashes of Louvain, the bombardment of Freiburg or London? Are songbirds or vultures to be seen on the battlefields of France, Servia, Russia, Austria, and Turkey? Has the horror of war actually horrified? May we learn to think in terms of peacefulness and brotherly love while those bound together by ties of race, religion, and tradition seek to destroy one another? Can terms of peace pervade our sleeping or waking hours, while Teuton, Celt, Slav., Jew, Protestant and Catholic forget their traditions in a storm of passion? Is it true that the dawn of peace is to be made possible by the flood of human blood that has reddened the earth and will nourish the crops for future generations? Some pacifists with a military perspective would have us learn that the way towards getting peace is through the creation of more horrible and more destructive agencies of war. If it be true that we may learn the ways of peace through the emotional violence

resultant from ghastly warfare, with all its goriness and devitalization, it will not have been waged in vain.

In so far as the world is concerned, outside of the commerctal advantage to the United States and the crystallization of national feeling into some definite form. the sixteen months of warfare have not redounded to the internal improvement of any nation, nor have we learned anything of paramount importance for the upbuilding of the future race. We have learned that war does indeed bring desolation. It clogs the wheels of social progress. It retards the development of the fine arts. It places obstacles in the way of industrial progress. It militates

against scientific investigation and research. It is unpropitious for ethical development and opposes the rational development of civilizing agencies. We are taught in no uncertain way that the peaceful quasi-combative strife in the interests of humanity is fraught with events of greater significance than can posibly be attained through demonstrations of military prowess or naval force.

Surgery Has Learned Little in This War

What have our surgeons learned? Practically no new surgical procedures have been devised save for minor technic in connection with the type of wounds that shells and shrapnel have made so plentiful. We have learned that our modern surgery, with the splendid asepsis of peace, has failed in the face of military exigencies. According to Asquith, the mortality rate among the wounded has

been 24 percent. Despite the lack of sanitation during the Crimean war, the mortality of the wounded was only 22 percent, while in the Franco-Prussian war the mortality among the German soldiers was but little

ofver 17 percent. Aseptic surgery has been practically valueless and impossible.

The problems of antiseptic surgery have created more discussion than at any time since the controversies over the pioneer experiments of Lister. Trench warfare means suppurating wounds. Carbolic acid has again come into its own as an antiseptic, even as it has blossomed forth in its state of nitration as destructive picric acid. We have learned more about resisting attacks made with chlorine, bromine, and phosphorus than about withstanding and overcoming that rarity in peace, "gas gangrene.'

In fact, in the realm of surgery, we have learned but

little save the corroborative testimony that compound fractures must be conservatively treated and that antitetanic serum is more valuable as a prophylactic than as a curative agent.

To be sure, surgery is not to be blamed for these shortcomings, but rather the negligent, life-disregarding, barbaric custom of permitting the wounded to lie unrescued on the fields of battle until days have passed, or they have dragged their battle-worn bodies to first-aid havens, or some valiant comrade in his temerity has braved the snipers and effected a rescue.



PHOTO: UNDERWOOD & UNDERWOOD

DR. RICHARD P. STRONG AND DR. EDWARD RYAN

Doctor Strong is the American who "cleaned up" Serbia. He was sent to that country by the American Red Cross to rid it of typhus, and with his efficient American staff he succeeded wonderfully. Doctor Ryan was head of the splendid American Hospital in Belgrade.

What Has Been Learned in Medicine and Hygiene?

What has medicine learned beyond the fact that oil of chenopodium may be utilized as a substitute for thymol in the treatment of



PHOTO: INTERNATIONAL NEWS SERVICE

DR. JAN TUR, IN A RUSSIAN HOSPITAL IN VILNA
THE "HOSPITAL" IS NORMALLY A GIRLS' COLLEGE, BUT, LIKE MOST SUCH
INSTITUTIONS, HAS BEEN TURNED OVER TO THE SICK AND WOUNDED

uncinariasis? Practically no great medical advance has been announced. The greatest lesson of this war has been the effectiveness of our modern methods of vaccine therapy. Anticholera inoculations, antityphoid vaccination, antityphus treatment have taken their place in the realm of military prophylaxis along with the routine usefulness of true vaccination, as demonstrated in the Franco-Prussian war.

We have learned to trust and have faith in our medical achievements of the past. We have learned to be thankful for the masterly visioned scientific spirits that create these marvelous agencies for the conservation of life which are no less effective amid the stenches and trenches of warfare.

Military hygiene has given us numerous lessons which may be applicable to modern life in times of peace. If huge portable equipments for the maintenance of a purewater supply are available in war, why may they not be utilized in times of peace, particularly in rural communities, for the prevention of typhoid fever, cholera, and dysentery? If it has been possible to provide

adequate laundries and disinfection plants almost at the battle-line, why cannot sanitarians take advantage of these instrumentalities for improving the hygiene and sanitation in the congested sections in our country?

We have learned anew the conserving influences of modern sanitation and hygiene. It has stood the test far better than had been hoped for, though far from perfection owing to the unfortunate conditions in which its work necessarily had to be accomplished. We have learned again the inherent hazards of vermin and the larger insects, and have found that the fight against lice, flies, mosquitoes, and other blood-thirsty allies of Mars, is worth more thought and an increased expenditure of funds.

In Sociology We Have Learned Much

In social science, valuable lessons are available. Sophocles wisely stated: "War loves to seek its victims in the young." Not alone has the youth of Europe suffered in adolescence and maturity, but the unborn will reflect the results of the debilitating strife

Nations are learning a bitter lesson with reference to their greatest national asset—children. That belligerents have learned their lesson and are realizing the immediate importance of taking steps for the protection of their unborn citizens is evidenced by the elaborate constructive policies now being urged in Germany and England. Nations are interested in promoting the welfare of mothers, encouraging pregnancy by maternity pensions, and are solicitous about welfare-work to offset the diminution of the birth-rate.

The German Society for Bevoelkerungspolitik, and the English society known as the Central Committee for the National Patriotic Organization, are seeking to effect practical economies in human life, leading to the rapid repopulation of their respective countries. The fight against neomalthusianism is just beginning. While in this country the movement for birth control and the limitation of offspring is gaining force on ethical and civic grounds, abroad there is growing an intense desire for children—more children.

We, too, can learn our lesson as to the value of human life. Breeding human derelicts is not to be the basis of our appeal. Military sacrifice is not to be set forth as the ideal to encourage maternity. We must revalue childhood, and question, not alone its purpose, but also our interest in the development of workers, professional men, artisans, and artists who are to help in developing and following the destinies of our country.

Paternalism, Alcoholism, Eugenics

Regardless of the form of political organization, whether republican, monarchical or autocratic, to some degree this war will teach the effectiveness of paternalism. The human derelicts and social wrecks of the belligerent countries, the widows, the orphans, the refugees, the crippled, the blind, the prostrated, and the paupers have become national charges. With personal and national bankruptcy impending or existent, the difficulties of a nation-wide restoration to familial independence presents countless problems.

In its social propaganda and practices, the United States has been and is behind the social-economic standards of the principal contending nations. Possibly we may learn the importance of evaluating the social benefits of some of the existing institutions which form the nucleus for reconstructive policies abroad. We can learn much regarding health insurance, workmen's compensation acts, oldage pensions, and similar institutions that

have scarcely begun to be appreciated in this country.

The crusaders' march in favor of temperance rather than prohibition will be added to, if we can but accept the implied meaning of the restrictions placed upon alcohol among the warring nations. A rational solution of the alcohol problem may be sought and found without the disorganization of society and with manifold advantages to our national life.

Much has been hinted at or expressed with reference to the racial deterioration consequent upon the destruction of so numerous a proportion of the vigorous, alert, and mentally balanced soldiers. It is difficult to prejudge the eugenic consequences, but probably no one will gainsay that the forces of war are dysgenic in action. Time alone will disclose the valuable lesson that is to be taught, but there will be ample opportunity for the study and investigation by those interested in the development of superman.

The Place of Woman in National Life

Politically, we have learned little of the relative advantages or disadvantages of different types of political organization. Absolute monarchies, constitutional monarchies, and republics have each revealed their weaknesses. Regardless of the inherent social, economic, and political characteristics of the belligerent nations, one truth has shone out with particular brightness. The place of women in national life has grown in importance. In civil, industrial, and political life they have been called into action. They are being sought to support their governments, not as non-participants in national affairs, but as part of the backbone of the citizenry.

Man's war is making history for women. Not only have they borne with fortitude and sad, impotent pride the anxieties, sorrows, griefs, and despairs incident to giving up husbands, sons, and fathers to the crushing Juggernaut, but they have rallied to their countries' defense by carrying on its industries and promoting its civil welfare. We have learned in countless ways their strength, their power, their potentialities for national development. May we not recognize therein a new and potent reason for granting them active participation in government?

Even the women's peace congress, an event viewed by many as foolish in the extreme and offering no promise of international good, served for the first time to place a little leaven in national councils, the growth of which has



PHOTO: INTERNATIONAL NEWS SERVICE
WORK FOR WOUNDED SOLDIERS
SIMPLE TASKS ARE GIVEN TO KEEP MINDS BUSY AND ENCOURAGE SKILL OF HAND

been noticeable, so that today a peace idea appears to be struggling for existence in every corner of the globe.

The large number of physicians who volunteered for military life created a dearth of practitioners to attend to the needs of noncombatants. Herein, we have again learned that women physicians are capable, conscientious, and long suffering in performing their medical duties, even though some have sought to indicate that the medico-social sphere of activity is the one for which they are best fitted.

New Opportunities for Physicians

Young American physicians are to have a splendid opportunity for progress and practice if they are ready to take up their habitation in foreign climes. The war has created a serious depletion of the foreign medical schools. Not alone has the professorial class given freely of its life and effort, but even the half-trained student body has plunged into the reddened maelstrom. Among the numerous medical schools of London today the only institution showing an increase of students is the London School of Medicine for Women. The over-production of physicians in the

United States may well be distributed throughout the world in order to maintain a normal balance between the medical and lay portions of the various communities.

It is obvious that educational institutions have suffered internationally. The war will leave foreign nations almost decimated of its greatest teachers. The number of students available for higher education in the arts and sciences will be greatly diminished. The first educational claims of the various nations will be for workers to rebuild the industrial and technical institutions of the country. The problem is being complicated by the necessity of many new types of institutions designed to preserve for national usefulness those now handicapped by blindness, deafness, mental infirmity, or physical disability. From these numerous educational experiments now in course of progress we shall derive many new ideas. By familiarizing ourselves with the details of the new forms of practical instruction devised for the reeducation of the handicapped, we shall gain a vast amount of knowledge applicable in our own educational institutions. Our knowledge of methods will be enhanced, the possibilities of our curricula will be enriched, and

the modern public-school system should be wholesomely benefited.

Can We Hope for Universal Brotherhood?

It is not beyond human power to conceive of a time when "nation shall not lift up sword against nation, neither shall they learn war any more." To accomplish this end, a tremendous ethical advance is necessary. It is difficult to believe that with the intensification of racial hatreds under emotional stress, with lowered ethical standards because of prolonged brutalizing influences, an era of brotherhood is soon to be inaugurated. It is true that the solidarity of this country has been developed since the Civil War, but it took almost fifty years to unify the earlier warring factions. The Civil War, however, took place between two sections of the same country, growing up with the same tongue, and the same religious and historical traditions.

With the commercial aspects of the present struggle as an impelling force, and with the various national characteristics suffering under the strain, it will be no small task for nations to grasp again the importance of spiritualizing life. The descration of ethics is a concomitant of all warfare. From each tragic drama, however, the audience carries new sensations of awakened lofty emotions.

Inasmuch as the great neutral nation has found that it can no longer, in spirit, be free from foreign entanglement, but that its prosperity and internal development is necessarily bound up in the welfare of all other nations, there is some hope that we shall appreciatively foster a spirit of internationalism that will promote universal brotherhood.

By some, war is regarded as a biological process. They see, in it, unrelentless Fate controlling, through cruel processes, the destinies of the world. The aggressive, combative types are to be eliminated through warfare and a non-combative race is to be developed biologically. In addition to the death of the strongest physical types, they foresee the racial deterioration of developing nations so that unethical war may result in the creation of an unwarlike people, ethically non-believers in warfare. This plan of "reversed selection," in the words of Saleeby, may give food for thought, though it calls forth many questions as to the possibility of ethical improvement as one of war's heritages. The unhappy, discouraging thought that must appeal to everyone is that civilization has not civilized unless we regard war as one of the desirable achievements of civilization.

Crile, in his discussion of "A Mechanistic View of War and Peace," wisely notes that our present system of education does not prevent war. Commercial relations, treaties, debt, bankruptcy, poverty, religion, military systems, hunger, fear of wounds and death are insufficient active forces to preclude war. It is patent that some fundamental error exists in our institutions of educational and social training. If it be essential, as Crile suggests, that war patterns of action must give way to peace patterns of action, in order that a dominating thought of peace may integrally pervade mankind, there arises a subject of paramount importance to be investigated, studied, organized, and applied by pacifists.

"There Never Was a Good War or a Bad Peace"

The most vital lesson that we can learn is the thought of Benjamin Franklin, "There never was a good war or a bad peace." There may have been holy wars, there may have been commercial wars, there may have been wars for national honor or national integrity, but the sum total of accomplishments for the benefit of the human race are such that it is doubtful if the world's progress has been due largely to this destructive element.

It is possible to conceive that in the evolution of mankind war was an essential step. For many years, vicious, ruthless competition in industrial life was justified as the very basis of commercial prosperity. Today, however, cooperation, coordination of activities and concerted action, appear to be the dominant note among the wisest industrial organizers. With the ever-increasing population of the earth, we are confronted with countless difficulties which are being solved on the principle of cooperation and mutual understanding.

Must this lesson lose its force when applied to the larger problems of welt-politik!

Cannot this country optimistically take the lead in fostering a new spirit of international comity, based upon the doctrine of the brotherhood of man?

Cannot some spiritualizing forces be evolved that will slowly gather strength and become diffused throughout the nations of the world, so that all mankind may join in a thanksgiving chorus? Then we shall hasten the realization of the hope expressed by Tennyson:

Ring out old shapes of foul disease, Ring out the narrowing lust of gold; Ring out the thousand wars of old, Ring in the thousand years of peace.

The Prostate Gland: Its Diseases and Disorders

By WILLIAM J. ROBINSON, M. D., New York City

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EDITORIAL NOTE.—Doctor Robinson has promised us a series of articles upon "The Diseases of the Prostate Gland." This is the first of the series, one which deals with a common, everyday disease with which every physician must be familiar, in the trenchant style and the practical manner so characteristic of everything written by Doctor Robinson. This series will be continued for several months.

AN ABNORMAL prostate gland may cause disturbances in the urinary tract, in the sexual sphere, and in the nervous system. The disturbances caused in the urinary sphere have been pretty thoroughly worked out and are well described in special treatises. Much less has been done in the study of the sexual disturbances caused by a disordered prostate gland, and very, very little—at least very little that is of any value—has been done in working out the general nervous and psychic disturbances caused by an abnormal or diseased prostate.

The field of nervous and psychic symptom-complexes that have their origin in the prostate gland has hardly been tilled as yet, but I can assure my readers that it would offer a rich harvest to any intelligent physician who would make a special study of the subject. The manifestations of a diseased prostate are so protean and may be so remote that to him who has not made a study of them the assumption of a causal connection may seem a far-fetched one; yet, he who has had a wide practical experience in genitourinary and sexual disorders and has given the matter special attention entertains no doubt of such a relationship.

Before proceeding with the systematic exposition of the diseases and disorders of the prostate, it will be well to report briefly a few cases of prostatic origin. In some of these patients, the connection with the prostate was not suspected for a long time.

Pruritus Ani the Dominant Symptom

Case 1. Patient, aged 44, married, has two children, never had any venereal disease. For the last nine months, he has been suffering severely from pruritus ani. He has been treated by three different physicians and has used a large variety of ointments and lotions, all affording but temporary relief. The only treatment that seemed to give relief lasting for any length of time was the thorough application of carbolic acid followed by a thorough swabbing with alcohol. Another treatment that gave him relief, but also of only

a temporary character, was, to apply compresses wrung out of water as hot as could be borne. He also received x-ray treatments, but without any benefit. Then I was requested to suggest a remedy, and I advised my favorite in all instances of pruritus ani, namely, painting with a 10-percent solution of silver nitrate. This accomplishes a cure in the vast majority of such cases, but in this instance the relief afforded was but slight and also only temporary.

An examination of the rectum disclosed a uniformly enlarged prostate gland of rather soft texture, but having a hard nodule here and there. Prostatic massage, three times a week, instituted thereupon, accomplished a complete cure in three weeks. The only other treatment given in conjunction with the massage was a hot sitz-bath every night. This was ordered both for its influence upon the pruritus and its direct influence upon the prostate.

That an enlarged or congested prostate gland may cause severe and protracted pruritus ani is well established, but this fact is known to only a few of the medical profession, and I have known many cases of pruritus ani being treated with innumerable applications and ointments, without even an attempt being made to examine the prostate. It would be well for every physician to bear this connection in mind and in intractable cases of pruritus ani to examine the prostate and to administer prostatic massage even if the gland is apparently normal.

A Case of "Lumbago"

Case 2. Mechanic, 30 years of age, single, no venereal history, excellent appetite, bowels regular, generally in good health. For the past eight months, he has been suffering off and on with "lumbago." The onset was gradual, but he thought it might have been due to contracting a cold or perhaps to overstrain at his work. He had used various liniments and ointments, took a number of Turkish baths, and finally had been given sodium salicylate, acetylsalicylic acid, and

even atophan. All these remedies remained

without the slightest effect.

A rectal examination disclosed a somewhat enlarged prostate gland, but so extremely sensitive throughout, that, in spite of his robust health, the patient, when examined, fainted away and if not supported would have dropped to the ground. Hot rectal irrigations were ordered to be made twice a day, followed by a suppository of iodoform, morphine and atropine. After ten days of this treatment, prostatic massage was instituted, which the patient bore better and better with each treatment; after two weeks of this treatment, the prostate was practically normal and the "lumbago" was completely gone.

Loss of Sexual Power

Case 3. Lawyer, aged 36, married ten years, has had no venereal disease, in good health in every respect. For the last two years, he has been noticing a gradual weakening of his sexual power, with respect to ejaculation. There was no difficulty whatever about the erections, but the ejaculation-time had been getting gradually shorter, until during the last month or two the ejaculations had occurred almost precipitately, ante intromissionem.

Examination disclosed a soft, boggy prostate gland, and on gentle expression a large quantity of prostatic secretion readily exuded. Prostatic treatment, consisting in massage and alternate hot and cold rectal irrigations, resulted in a complete cure in four months. The only other treatment given consisted of instillations of silver-nitrate solution into the prostatic urethra with a Guyon syringe, repeated once a week for the first four weeks. As endoscopic examination revealed a normal condition of the prostatic urethra, these instillations were discontinued.

Sciatica Resulting From Prostatic Trouble

Case 4. A number of cases of sciatica, as the result either of prostatic disease or of too strenuous prostatic massage, have been reported. I have had only one such case. This patient had been subjected to various kinds of treatments. Galvanocautery along the sciatic nerve was applied, numerous ointments containing salicylic acid, oil of wintergreen, oil of mustard, and the like, were rubbed in, and quinine and urea hydrochloride was injected. Relief was obtained, but only temporarily.

An examination of the prostate gland revealed several hard and extremely painful spots in its left lobe. The right lobe was practically normal. Treatment, consisting of massage of the left lobe, and hot irrigations followed by ichthyol and iodoform suppositories, resulted in a complete cure of the sciatica; and it has not returned for now five years.

A Case of Priapism

Case 5. Patient, aged fifty, has had gonorrhea at three different times, at the ages of eighteen, twenty-five, and thirtyeight years. He had evidently been cured completely, for, during the last twelve years he has had no symptoms of any kind and the urine has been clear, containing no shreds whatever. He is sexually normal, but for the last ten or twelve months he had been annoved by attacks of priapism when asleep at night. These attacks would awake him, and various methods tried by him, such as walking on a cold floor or dipping the organ in cold water, relieved him only occasionally. Intercourse at such times also was without any effect, the state of priapism remaining practically the same as before coition. Bromides, which he used in very large quantities, on the advice of a local physician, produced no other effect except upsetting his stomach and cause a disagreeable acne on his back and the back of the neck.

The prostate was found enormously enlarged, but only little secretion could be expressed. Treatment directed to the prostate and consisting in massage, hot and cold irrigations, and introduction of iodoform suppositories, resulted in a practically complete cure within a period of three and one-

half months.

A Psychic Effect of Prostatic Disease

Case 6. This case is of extreme interest, perhaps as interesting as any I have to report; for, the trouble caused by the prostate gland not only was of a physical character, but seemed to produce a complete change in the

patient's psyche.

The patient was forty-six years old and occupied a prominent position in the business world. He was a model citizen and a model husband. His sexual life was as nearly normal as we could find in our modern "civilized" state of society. He never had any venereal disease, had masturbated but moderately and then only for a short time while he was a boy, was married at the age of twenty-four, and lived a normal, moderate life. He practiced neither excessive venery nor undue continence. About two years

previous to my seeing him, he noticed an increase in his libido. While previously he would indulge once a week or once in ten days, he began now to indulge two, three, four times a week. He didn't think there was anything wrong about this, ascribing this increased libido to his better health; but the condition was getting gradually worse, until he began to indulge nightly, and eventually several times during the night. His health began to suffer, he began to feel dull and no longer could attend to his business properly. The demands of his libido, however, were so insistent that he felt he had to satisfy them. The indulgence would give him no satisfaction, but, still, he could not exert sufficient will-power to abstain. Finally he began to look for extramatrimonial adventures, something he had not done previously during the entire twenty years' period of married life. His running after women was becoming notorious; the fact became known to his wife and his business associates, and, though he felt his position keenly, and suffered much from the consciousness of the grief that he was causing his wife, he could not constrain himself. Things were getting scandalous.

I had a number of similar cases to treat and it was not difficult to arrive at the etiologic factor of this patient's change of conduct. His prostate gland was found to be enlarged, congested, and it felt hot and throbbing; the man, however, complained of no objective symptoms relating to the prostate gland. Daily massage of the gland, in connection with cold rectal irrigations, resulted in immediate improvement. Adjuvant treatment consisted in cold baths and in giving large doses of the combined bromides. The man still comes occasionally for treatment, but the life he leads is as normal as it was in previous years.

[To be continued.]

Experiences with Bacterins in Cases of Acne Vulgaris

By J. FAVIL BIEHN, M. D., Chicago, Illinois Director of Clinical and Biologic Laboratories, The Abbott Laboratories

N THIS paper I shall attempt to record my experiences with the use of bacterins. and such additional remedial measures as were necessary, in a number of cases that were referred to me after the usual method of simple bacterination had failed to produce results. I shall attempt to eliminate all cases that seem to belong to similar types, and I trust that the results here reported may assist others in the practical solution of like cases as they are being met in daily practice. The cases were selected as representative types and the actual procedures instituted in their treatment will be recorded. Incidentally, a certain amount of theorizing will be hazarded as to the probable reasons for the initial failures.

Most of the patients were referred by other physicians, owing to unsatisfactory results from bacterination, and I am venturing to account for the seeming large percentage of primary failures. The essential idea, however, is, to show that in suitable cases, by careful regulation and close attention to the patient, combined with a thorough study of the clinical condition (irrespective of the particular infection), results from bacterination are generally satisfactory.

One of the most common pathological conditions that the physician is called upon to treat, and one in which medicinal measures have not been at all encouraging, is acne vulgaris. When bacterination was first proposed for this disorder, it was heralded as a cure-all, and the excellent results reported by a number of observers have led a great many physicians to use bacterins in these cases—sometimes with excellent results, but many times falling far short of what was expected. Consequently, depending upon whether the physician primarily had good results or the reverse, he praised the bacterin-therapy or condemned it.

My experience as a bacteriologist, in examining these cases of acne, leads me to believe that it is exceedingly rare to meet a pure infection with the bacillus acne, if pustules are present. Staphylococci (either staphylococcus albus or the staphylococcus epidermitis albus, or, as some bacteriologists claim, the diplococcus of acne) are practically always present—rarely staphylococcus aureus.

Most manufacturers supply socalled staphylo-acne bacterins, and these should be used in preference to simple acne-bacterins. The usual dose contains from 5 to 10 million acne-bacilli and from 100 to 200 million staphylococci. These stock bacterins, in many cases, elicit a very favorable response; but often, if the physician depends upon bacterins alone, failure results, as is shown by the following cases.

Acne Depended Upon Intestinal Condition

Case 101. R. J., age eighteen. Mild but persistent pustular acne, involving especially nose, chin, and neck. Very few large comedones on back, many on face. Pustular lesions showed diplococcus of acne only, no acne-bacilli being demonstrable except in the comedones on the back. As a result of a series of stock staphylo-acne injections, this patient apparently recovered. Both physician and patient were very much pleased with the result.

Six weeks after discontinuance of the injections, there was a relapse and there appeared a large number of pustular lesions about the chin and neck. A further course of stock staphylo-acne bacterins did not seem to help as much as did the previous course, the condition did not clear up as well as the first time, further relapses occurred, and the patient continued to have suppurative lesions after the second course of injections was given up, which he did owing to the unsatisfactory progress of the disease. He again suffered a relapse, and his ultimate condition was even worse than before the bacterin-treatment was instituted.

Upon questioning the patient, I found that, following a change of his boarding-place and of occupation from outdoor carpenter-work to inside work at a machine, he was suffering from constipation. At the time I saw him, his bowels had not moved for three days. He also informed me that he had discontinued the diet prescribed by his physician. This, he said, was particularly due to changing his boarding-place, for he was unable now to select his food as he had previously done. Uranalysis showed a high acidity (85,000 units); there was much indican present.

This patient was again referred to his family physician, and a thorough course of cathartics and alkalis was suggested, and instituted, with a low protein diet and staphylo-acne bacterins. The result was that the acne entirely cleared up. There was no relapse for some three months, when he went camping in the woods with several other young men, and then, following dietetic indiscretions (they doing their own cooking), a third relapse occurred. This outbreak, however, did not require the use of bacterins and

cleared up readily after he was advised by his family physician to return to a low proteid dict. It is evident that the gastrointestinal condition in this case was the direct exciting factor in the relapses.

Comedones Must Be Evacuated

Case 41. Young lady, age 28, has had pustular acne for eight years. During this time treatment had been persisted in, though somewhat irregularly-medicinal, mechanical, and electrical-but apparently without satisfactory results. Then followed a course of bacterin-treatment. In all, twenty-five injections were given during a period of six months, with but slight improvement. It is true that the lesions were fewer, but there still remained many old scars and large, congested, indurated hyperemic areas. These were very disfiguring. They rarely pointed or came to a head, but seemed to retrogress and then again, after a period of latency, become active.

Examination disclosed a marked secondary anemia (erythrocytes, 3,500,000; hemoglobin, 68 percent; color-index, 0.9; leukocytes, 10,000). The urine contained a trace of albumin, 65 Grams of total solids, and 18 Grams of urea. There were no casts. For the anemia, iron and arsenic with nuclein were administered hypodermically; boldine, 1-32 grain three times daily; and a mild laxative was continuously administered, sufficient to produce two thorough movements per day.

This treatment was combined with local massage; hot wet-packs each morning. All comedones were removed once a week, and as many of the indurated lesions as possible without producing too much "disfigurement" (as the young lady expressed it) were opened.

These deep-seated indurated lesions that did not tend to point are characteristic of many cases of acne. If they are incised and the incision is carried deep enough, pus will be found; and careful examination of the pus will show that there is always present a comedo. This comedo is not in communication with the surface. The lesions are very deep-one-fourth of an inch or more beneath the surface. They are very hard and firm to the touch, indicating a marked induration surrounded by an area of congestion, and show as slightly elevated red blotches upon the face. These lesions tend to retrogress to some extent, absorption frequently taking place without the pus being discharged externally; but the irritating comedo, that remains, is a foreign body, and sooner or later will again set up purulent inflammation as the patient's general health and resistance falls. It is absolutely necessary that these lesions be deeply incised and the comedo and purulent contents removed.

It has been my custom to use an iridectomy-lancet or a needle for incising these pustules. In addition, ammoniated-mercury ointment, half strength, was applied each night, and again thoroughly removed with soap and hot water in the morning. A diet consisting largely of fruits and vegetables, combined with the liberal use of buttermilk, was advised. Stock staphylo-acne bacterins were given, beginning with 10 million acne-bacilli, which was increased to 50 million, a dose being given seventy-two hours after the reaction of the previous dose had subsided.

The hyperemia and indurated lesions showed a marked improvement within three weeks and after four months the patient was discharged, as no evidence of acute inflammation was to be noted. There were, however, many scars showing some evidence of induration and congestion. There was no evidence of active disease. At that time the albumin had entirely disappeared from the urine; total solids amounted to 70 Grams; urea, 30 Grams-per day; erythrocytes increased to 4,350,000; hemoglobin, 88 percent; colorindex, approximately 1.0; leukocytes, increased to 14,000.

This patient has been seen lately (some nine months after this treatment) and there has been no return, no evidence of active disease. There is some further slight improvement of the induration and congestion, but the scars and pits necessarily will always remain. I believe that the medicinal and surgical treatment, in addition to the bacterins, were the essentials in this case.

Slight Recurrences a Feature of This Case

Case 97. R., E., male, age 26. Severe pustular acne on the face, especially on the forehead; many large comedones. Trouble of seven years' standing. This patient had had the pustules incised and comedones removed, and was put on a low protein diet. Hot fomentations had been applied each evening; sodium citrate, 30 grains, a day, was given combined with laxatives, and stock staphylo-acne bacterins every seven days. There was a slight improvement after the third week, but this did not continue. Thereafter bacterins were given every fourth day. but no apparent improvement was observed at the end of three months, when, as a result of the patient acquiring paratyphoid fever, he came under my care.

The paratyphoid fever was of a mild type and was differentiated and diagnosed by blood-culture. Staphylo-acne bacterins were advised and given during the entire course of the fever, in combination with an autogenous paratyphoid bacterin. The fever lasted two and one-half weeks. During convalesence, the staphylo-acne bacterins were continued, but the dosage was rapidly increased, with excellent results. Six weeks after beginning with the increased dosage, the face was practically clear.

This patient received at his last injection 110,000,000 acne-bacilli and 1,000,000,000 staphylococcus albus. Whether the diet or the intercurrent paratyphoid fever or the rapidly increased dosage or rest in bed, or all these factors combined, resulted in clearing up this case, I am unable to say, although I believe that we were justified in rapidly increasing the dosage, owing to the fact that the previous treatment, in which this dosage had not been reached, produced only temporary results.

Case 64. Young man, age 19. Severe pustular acne of face, neck, and back; many large comedones, deep indurated pustules. This patient received stock staphylo-acne bacterins for a period of eight months, no other treatment being given. The first few doses apparently produced some benefit; thereafter no change was noted. He was sent to me for an autogenous bacterin. Examination of pus from one of the deep, indurated lesions demonstrated the presence of the staphylococcus albus and acne-bacillus. An autogenous bacterin containing these organisms, combined with dietetic and medicinal measures, proved markedly beneficial. However, we were unable, in the last three months' treatment, to prevent occasional lesions from appearing.

In This Case, a Failure

There seems to be a periodicity about the recurrence—usually every fourth, or, sometimes, eighth week. We had carefully examined this patient's general condition, modified his diet, and even sent him to a hospital for a complete rest, and put him on a milk diet for a week. We also markedly increased the bacterin dose, in fact, to such an extent that 100,000,000 acne-bacilli and 1,000,000,000 staphylococci failed to produce a reaction, but we were still unable to prevent the appearance of a few lesions occasionally. These seemed to appear, though they rarely suppurated, whether bacterin-treatment was being given at the time or not.

Although this case has been markedly improved, we cannot state that we have produced definite results, so far as a cure is concerned, for there still are occurring aborting lesions. We are unable, so far, to determine the exact cause of these occasional slight recurrences. The infection has not changed in character, so far as we were able to determine by bacteriologic examination.

In my experience these chronic cases are very difficult to cure, while acute cases always

respond promptly.

Hidden Niduses of Infection Must Be Discovered. Value of Nuclein

Case 66. Dr. J. J., age 34; pustular acne. Has received a course of bacterin-treatment from a brother physician, also has given himself three different courses of stock staphyloacne bacterins. Examination of the pus showed a pure staphylococcus-aureus infection, no staphylococci albus or acne-bacilli

being present.

An autogenous bacterin of staphylococci aureus rapidly relieved the condition, but a relapse occurred after several weeks. An autogenous bacterin was given, when the condition was rapidly relieved; four injections being sufficient. However, two months later, there was another relapse, still showing a staphylococcus-aureus infection. The patient now came to me, and a thorough examination revealed a chronic infection of the antrum of Highmore. Cultures showed the presence of the staphylococcus aureus, pneumobacillus of Friedlander, and streptococcus pyogenes. Several of the teeth, as shown by x-ray examination, had been improperly filled, as a result of which blind abscesses in the upper jaw had formed.

Surgical measures directed to the drainage of the antrum and alveolar abscess, with further bacterin-treatment, were instituted. A bacterin containing pneumobacillus of Friedlander, staphylococcus aureus, and streptococcus pyogenes were given. Since this time the Doctor has completely recovered, has had no relapse, and has markedly improved in health, having gained over 22

pounds in weight.

It is evident in this case that several things were originally at fault. In the first place, the constant source of infection was not located, the source, namely, the alveolar abscesses and infected antrum being overlooked. Consequently, the proper bacterin was not given at first: the patient did not have a staphylococcus-albus and bacillus-acne infection, but a staphylococcus-aureus infec-

tion, this producing pustular acne; which was only one of the manifestations of his disease.

Furunculosis Added to the Acne

This case is very similar to another one, in which the young man was found to have a staphylococcus-aureus infection, which produced pustular acne and at times a furunculosis, involving particularly the neck on the left side. This furunculosis was supposed to have been due to irritation caused by his collar, and affected the left side—the young man sat at a desk and frequently turned his head to the left in order to refer to a ledger.

A stock staphylo-acne bacterin had been used for three months, without apparently influencing the disease more than to a very slight extent. Exercise, proper diet, and local massage had also been instituted, but the disorder continued to progress. Examination of the pus from a furuncle showed a pure staphylococcus-aureus infection. There were staphylococci albus and aureus in the acne lesions on the face; no acne-bacilli could, however, be demonstrated. An autogenous bacterin was prepared and was given, in increasing doses, for a period of nine weeks, without marked benefit. The physician then brought the patient to me again, when I made a blood examination.

Nothwithstanding the fact that he had a purulent infection and had been given a staphylococcus bacterin, the leukocyte count was under 8000 per cm.; red blood-corpuscles, 4,600,000; hemoglobin, 98 percent. He did not have a very severe anemia, notwithstanding his long-continued local staphylococcus infection. The man refused further bacterintreatment, but insisted that something be done for him; in fact, as he expressed it, he was "disgusted" with this method of treat-

Nuclein Contributes to Success

ment.

I then advised the use of nuclein, and, knowing the patient to be somewhat erratic and not easy of control, I advised the doctor to give him 2 Cc. of Lundvall's solution (a 10-percent solution of nuclein) subcutaneously (abdomen). The physician did so, and two hours later I was called, as the man, as he expressed it, was in "agony" and had had a chill. There was no temperature at the time, but he suffered severe pain, much more severe than is usually produced by nuclein injections, although these are always somewhat painful. Hypodermatic injections of quinine and urea hydrochloride, combined with the

application of compresses of magnesium-sulphate solution to the site of injection, resulted in quieting the patient and relieving

the pain

He refused further treatment, but returned to his family physician some weeks later, at which time it was found that the pustules on the face and lesions on the neck had entirely disappeared. He has had no relapse in the fourteen months which have passed since he received this nuclein solution. Unfortunately, blood examination was not made after Lundvall's solution had been used.

The Lundvall solution was used, because we know definitely that nuclein given hypodermically will increase the number of leukocytes, and this patient had leukopenia. Immunity depends upon the presence of leukocytes. In all cases that recover from pyogenic infections, there is a leukocytosis. In view of the fact that the disease cleared up so rapidly after this injection, and knowing the action of nuclein, I believe that we are justified in attributing the cure, at least in a measure, to the use of the nuclein solution.

What Bacterination Seems to Teach

As a result of my experience with bacterination in cases of acne, it occurs to me that the following facts should always be borne in mind:

In all of these cases there is some underlying pathologic condition which reduces the general vitality or resistance of the patient to an extent sufficient to prevent recovery from the acne infection. While in many of these cases this condition is but slight and a moderate stimulation, such as can be produced by the use of staphylo-acne bacterins, alone is sufficient to cause the patient to recover, owing to the fact that he is not overwhelmed by some other pathologic condition, his cells are capable of reacting to the stimulation produced by the bacterins. But in all cases it is essential to treat the patient as an entity, irrespective of the fact that he has acne vulgaris, and to determine, if possible, from what other pathologic condition or functional derangement he may be suffering and as a result of which he does not entirely recover from his acne, either naturally or from simple bacterination.

Again, we should keep in mind that, while bacterin-medication always produces a leukocytosis, and the leukocytes are absolutely essential to recovery, there are certain cases in which this leukocytic response does not occur. Indeed, I am certain that, if we made

leukocyte counts in all of these cases, we should find a large number that do not properly react, so far as leukocytosis is concerned, to bacterin injections.

These patients must receive additional stimulation. This may be obtained by means of salicylic acid, pilocarpine or nuclein. In my hands, the best results have been obtained with nuclein. Further, the injection of a bacterin, provided the patient's cells are capable of reacting to the stimulant thus introduced, results in the production of specific antibodies. Therefore, it is absolutely essential that the proper bacterin be given. This explains many cases that are benefited by autogenous vaccines after the failure of stock vaccines.

Points About Staphylo-Bacterins

For the staphylococci, there is not a marked differentiation, a staphylococcus-aureus stock bacterin practically always giving results in staphylococcus-aureus infections and to some slight extent even in staphylococcus-albus infections; but, in the case of the streptococcus, the colon-bacillus, as also some other organisms, there are so many varieties that failure occasionally results from the stock bacterins, owing to the fact that a given stock bacterin does not contain the particular variety of organism from which the patient suffers. For example, it is possible that, in a streptococcus-viridans infection, streptococcus-pyogenes bacterins will not be as beneficial as streptococcus-viridans bacterins. This fact manufacturers of stock bacterins aim to obviate in a measure by the combining of as many diverse strains as possible-in the socalled polyvalent bacterin.

Further, bacterins are only a stimulant to the patient's cells, and, even if the patient's cells have responded by the production of antibodies, unless these antibodies can be brought into intimate contact with the infecting organisms, there will be no effect

upon the disease.

Surgical measures directed to the correction of deformities and removal of foreign bodies, purulent discharges, and so on, are absolutely essential. Infected foreign bodies must be removed, otherwise the patient will not recover, irrespective of whether bacterins are used or not. All sources of irritation should be removed.

If we are aware that, when we inject bacterins, we are injecting toxin, or poison, with a view to stimulating the patient's cells to produce antitoxin, we are not at all consistent if at the same time we fail to attempt to place

the patient in the best possible condition, so that he may be able to take care of this additional poison. Many a time a physician injects bacterins into a patient whose cells are already overwhelmed by toxic bodies, and in this way is doing actual harm—is adding fuel to the fire—is not giving the patient a fair opportunity to obtain benefit. And this I believe to be a very frequent cause of failure.

Some Remarks About Endamœba Buccalis

By Dr. Karl Elander, Goteborg, Sweden

H AVING made the treatment of alveolar pyorrhea a specialty for about fifteen years, it naturally was with great interest that I learned of the theory lately advanced by Barrett, according to which a species of ameba (endamœba buccalis) is the cause of this affection; and now, after having studied a large number of such cases microscopically, I am very much inclined to support this view.

The probability that the ameba is, in all instances, the most prominent factor in producing alveolar pyorrhea is confirmed, not only by the unanimous opinion regarding the constant presence of this parasite in the puspockets around the teeth, but also by the therapeutic effect of an amebicide, notably emetine. Other circumstances pointing to the amebas as the causative factor are, for instance, that the disease progresses only in one direction, namely, apically, so that the atrophying process of the periodont proceeds gradually, and is followed by a secondary atrophy of the alveolar bone; whereas, the gingival lesion is cured spontaneously, to a certain extent, the gingival wall of the pocket acquiring an epithelial membrane of the same kind as the gum.

This proves that the disease progresses gradually toward the apex and that the lesion always is located between the border of the epithelial membrane and the sound periodont; that is to say, the exact spot where we find the amebas in any considerable number. Another proof of the fact that the disease undoubtedly is strictly located in the periodont is, that the patient's health always returns when the affected teeth are extracted. So, also, health is restored when the extracted tooth is replanted after first having been thoroughly cleaned. All writers agree that this latter procedure cures the disease, although there seem to be differences of opinion regarding the prognosis with regard to the replanted tooth. Inasmuch as both the extraction and the replantation frees the subject of pyorrhea, this result must follow because something has been removed in either case; and that is the diseased periodont. Consequently, the latter must be the real seat of the disease.

The tendency of the disease, to advance in only one instead of extending in every direction (as, for instance, in an abscess), has an analogy in the behavior of the entameba of tropical dysentery. Regarding the latter, Hoppe-Seyler says: "The amebas intruding into the mucous membrane, produce soon, now here now there, epithelial necrosis. They seem to give off a poison which kills the cells. They then advance farther, both in the blood and the lymph, to the base of the mucosa. Great swelling and necrosis follow, forming thick knots, which afterward are destroyed and emptied into the intestine, leaving a deep ulceration."

In studying the living entameba, I have found the electric current of great assistance. The ameba we know to be rather shortlived outside the periodont, and Barrett and others, therefore, have recommended warming the saline solution and the slide to about body-temperature, so as to give the protozoon the best conditions. This is a rather difficult procedure, as the slide and the liquid will be cool in a few moments; and then the ameba, even if still living, is sluggish or motionless. I have, therefore, tried to stimulate the parasite by means of electricity, and have found that it is quite sensitive to a very weak current.

Two platinum electrodes are fixed on the table of the microscope, so that by means of a light spring they are made to press upon the slide on each side of the coverglass. The amebas are suspended in normal saline solution and a cotton pellet, moistened with the same solution, is placed on each electrode and touching the border of the coverglass. The electrodes are connected to an ordinary cataphoresis-apparatus and the current gradually turned on.

I have not observed electrotropism, but when the current amounts to more than one milliampere, the formation of pseudopods can be seen quite distinctly. If the current increases to 4 milliamperes, the amebas are killed in a short time. Their pseudopods are then retracted and the amebas assume a roundish shape, suddenly evanish. I am still studying the influence of the current on

the ameba, and shall report any further observations later on. In the meantime, I presume, it may be of interest to others studying the amebas to be apprised that the electric current is of great help in promoting the amebic movements.

Adventures of a Frontier Doctor

No. 1. THE CATTLE RUSTLERS

By CHARLES STUART MOODY, M. D., Hope, Idaho

EDITORIAL NOTE.—A frontier doctor has many unusual experiences. Doctor Moody has had his full share, and some of these he will tell you about in the story following and others to appear in succeeding issues of this magazine. No reader of "Clinical Medicine" should miss a single one of these "Adventures."

WE ARE taught and we read that matters communicated to us in professional confidence are not to be revealed except upon the consent of the person concerned, but I have often wondered how many times the ends of justice have been thwarted by this rule. One incident in my own career, which happened many years ago, will serve as an illustration.

Older residents of north Idaho will recall a band of cattle rustlers that some twenty years and more ago operated in the region north of the Salmon River. This band was thoroughly organized, and so bold did they become in their raids that they did not hesitate to descend upon a herd of fat cattle in broad daylight and make way with them, running them across the river, and concealing them there in some out of the way canyon until the excitement had died out; then the brands were changed and the cattle marketed at some railway station in eastern Oregon.

This band continued its depredations for several years without any of its members being apprehended; although it was an open secret that they were under the protection of the local authorities and that their identity was well known to the sheriff and his men. At last, however, their activities became so pronounced that the cattle-men themselves decided to take the matter in hand. To this end, a secret meeting was held and a patrol of "cow-punchers" was organizedmen who had a strong predisposition to shoot first and ask all necessary questions afterward. These men were detailed to watch the different herds of cattle; and so secretly was the plan carried out that neither the rustlers nor the sheriff and his aids were cognizant of it.

In less than three weeks after the secret patrol had been organized, the rustlers descended upon a bunch of fat steers that were just ready for the market. In the battle that followed, one of the rustlers was badly wounded; the band, however, managed to make its escape in the darkness, the trail being lost somewhere among the rocks on the banks of the Clearwater River.

A Midnight Call

It was along toward midnight on the 24th of October, the period of the autumn rains, and it was raining as it can rain only along the Clearwater when the conditions are just right. I had gone to bed, thankful that no ailing mortal was in need of my services on such a night, and had fallen tranquilly asleep, dreaming perhaps of a heavenly time when country doctors no more will have to roll out of their warm beds in the dead of night, when a knock sounded on the door. I crawled out and went to the door, but could see no one. As I was about to close the door again, I heard a voice out of the darkness, saying, "Doctor, dress and come over to your office."

I donned my clothing, threw on a raincoat and walked over to the office, located only a few steps away.

No one was to be seen upon my reaching the office. I unlocked the door, stepped inside and made a light; then, as I turned, I was surprised to face a man who wore a black mask and held in his hand a large and decidedly competent-looking revolver. Evidently this unpleasant stranger had stealthily entered the place after me. I fancied I could see the fellow smile behind his mask at my start of surprise upon beholding the apparition.

"Do not be alarmed, doctor," the man said, "no harm will befall you if you obey

orders. Get together such things as you may need to perform a surgical operation and come with me."

"Where to?" I asked.

"That you probably will never learn; but, should you ever find out, it will be better for you to keep that information to yourself."

"What if I should refuse to accompany you upon such terms?" I asked further.

"Do you think that you will refuse?" he asked.

Candidly, I did not think so. There seemed to be such a convincing air of finality about the unwavering directness of that revolver that I deemed it advisable just then to enter into the humor of the thing and to accede to the whims of the man who held it.

I hastily packed my emergency-kit the while my unbidden guest's eyes were on me and soon announced myself ready for the

journey.

My guide led me to where two horses were tied beneath a tree, and one of them, I was startled to discover, was my own saddleanimal. Thus, then, the persons who required my services were, at least, acquainted with the surroundings, else the man would not have known where to find my horse and saddle. Without a word, we unleashed, mounted, and proceeded to ride down the river-trail. Presently my guide halted, produced a black silk handkerchief and said, "You now will permit yourself to be blindfolded."

A Ride With a Mask

I submitted as gracefully as possible, the mask being tied over my eyes in such manner that it was impossible for me to see. The man then took the reins of my horse and we

resumed our journey.

Although my hands were free, I knew better than to attempt to remove the mask. I tried to guess the direction we were traveling, but could only tell that after an hour's ride we were ascending the steep side of a canyon, and from this I argued that we were winding up from out of the river-bottom. For several hours we toiled up this steep canyon-side in silence. The rain continued to pour, and it was but a short time before I had been drenched to the skin and feeling thoroughly uncomfortable. I attempted to engage my guide in conversation, but these efforts did not meet with success; so, I, too, relapsed into silence as we went on through the dreary night. After what seemed an age, I could see the gray dawn beginning to show through my mask. Then we descended

into what appeared to be a wide mountainvalley or meadow, crossed it, ascended another short hill, and then, at last, our horses came to a halt. My guide dismounted, assisted me to alight, then conducted me into a house.

Shaking with cold and half dead from fatigue, I was led into an inner, warm room and the mask was removed. I found myself in what appeared to be a room in a large log cabin, a bright fire burned in an open fireplace, a lighted lamp stood upon a table, and the table was laid for a meal. When my guide retired from the room, he locked the door after him; and, as there was no window, I found myself effectually imprisoned.

I threw aside my raincoat and basked in the warmth of the fire. In half an hour or so the door opened and a masked woman entered, bearing a tray with my breakfast. She placed the food on the table, then retired as silently as she had come; however, I was hungry and needed no persuasive invitation to sit down and eat. The meal finished, I lighted a cigar and once more seated myself before the blazing fire. Dead tired, I soon was soundly asleep. It must have been nearly 9 o'clock when a man called upon me to follow him, and I was conducted into the livingquarters of the house and there found assembled six persons—two of them women all masked.

One of the men advanced to where I stood. "Doctor," said he, "you have been called here upon a very delicate mission. One of our number has been accidentally and, we fear, seriously wounded. There is more than one good reason why it is better for you that you should never know where you are or upon whom you are attending; hence, these disguises and the precautions that have been taken in bringing you here. Before entering the sick-room, we must have your promise that you will never make mention of this visit as long as you live in this country, and I may add that your personal safety will depend upon your strictly observing these demands."

I merely bowed in assent.

"If you are ready, we will now visit the patient."

A Wounded Girl-Masked!

We passed into an inner room and there I saw lying upon a couch what, at first look, I thought to be a young man, but closer inspection revealed a young woman, hardly more than a girl. To my surprise, she, too, wore a black mask over her face. The girl

was moaning with pain and it required only a cursory examination to disclose the fact that she was consumed by fever, while a crude surgical dressing covered her left breast. Removing the bandage, I found that her breast had been almost completely torn away by a high-power rifle-ball. Those of you

who have had experience with the explosive force of high-power missiles will readily understand that such a bullet, when entering the female breast at its lower internal margin, and passing upward and outward, to emerge near the outer angle of the clavicle, would leave the flesh in a pretty badly lacerated condition. The wound already was several days old and was beginning to show signs of sepsis. I decided at once that, in order to save the young woman's life, it would be necessary to perform what amounted practically to amputation of the breast.

The man who does surgery in the wilds of the Northwest must soon learn to adapt himself to conditions as he finds them, if he would succeed. It was manifestly impossible to get this patient out to where she could have hospital care, and it was equally manifest that unless something were done immediately she was doomed. Without question, I was here confronted by the biggest problem in my profes-

sional career, yet, there was no time to withdraw, and there was even less time for hesitation.

I arose from my examination.

"It will be necessary to amputate the lady's breast," I said to those standing expectantly about, "and in order to do so I must administer an anesthetic. I must request you to remove this mask."

"But," protested one of the women, "that will disclose her identity."

"Doubtless," I assented, "but absolutely necessary, nevertheless."

They drew aside and consulted in whispers. Then the same man who had talked with me before approached and spoke: "Doctor, will you give us your promise, upon honor, that should you ever, at any future time, happen to meet this young lady, by no word or look will you reveal the fact that you have met her before?" Assuredly, by this time I was so deeply interested in the case that I was willing to make any promise within reason;

so, when all was prepared to administer the chloroform, one of them removed the mask.

Stepping to the bedside, I looked into the pain-filled dark eyes of a strikingly beautiful young woman, and so indelibly were her features impressed upon my mind that I have not been able to forget them, although



DR. CHARLES STUART MOODY
Whose "Adventures of a Frontier Doctor" begin in this issue of CLINICAL
MEDICINE

years have passed. Necessity compelled me to be my own anesthetist, my own assistant—one learns to do such things in the wilds, if he attempts to do surgery. That was before the days of finished asepsis; still, cleanliness working together with a naturally vigorous young womanhood eventually brought the patient through very well.

I completed my work, then seated myself by the bedside, to await the return of my patient to consciousness. All that day and the day following I sat there and ministered to her, and during that time we became quite friendly, so that, when the shadows of the third night fell, I bade her farewell with a feeling of sincere attachment. No matter what she might be, to me she was a suffering fellow mortal in need of my meager skill. My mysterious guide was ready with the horses and, mounting, we rode away on our long nightly return trip. When half a mile away from the cabin my companion halted, produced the handkerchief, and once more I

permitted myself to be blinded for the

Another long, weary night we rode, my guide leading my horse, as before. Not a word did he utter during that journey. When the new day began to break we had come out upon a highroad. Our horses were halted and my blindfold was removed.

"This," said the guide, "is the old stageroad leading to P—. You have your choice either of going there, which is less than a dozen miles distant, or you may take the

road directly home."

I turned my horse's head toward home, the man watching me until I was nearly out of sight around the bend in the road. Then he turned his horse and disappeared into the forest. I reached home safely that afternoon, tired and half-dead from loss of sleep.

The sequel to this incident happened some five years later in the city of L—, not many leagues from my old station in the mountains. We were attending a race-meet in

that city, the guests of friends. It was the day of the ladies' hurdle-race and we were awaiting that event. A young woman, mounted upon a beautiful black Kentucky thoroughbred, rode up to where our group was seated, dismounted, threw the reins over her arm and approached. I glanced at her and could scarcely restrain my start of surprise—it was my mysterious patient of the mountain-cabin.

My hostess turned to me: "Doctor Moody, permit me to introduce Miss K—, whom we hope to see carry off the honors today in

the hurdles."

The young lady frankly extended her hand: "I am very pleased to meet you, doctor," she said. "We have never met before, have we?"

"I am quite sure I have never had that pleasure." I took her hand and looked her squarely in the eyes.

I lied like a gentleman—a doctor often

Corporation Surgery

How the "Company Doctor" Handles Emergency Work By Samuel C. Beach, M. D., Chicago, Illinois

EDITORIAL NOTE.—In this introductory article, Doctor Beach suggests the highly practical character of the material to follow in succeeding papers, in which he will take up, one by one, the everyday emergencies which must be dealt with in corporation practice. The "company doctor" has this branch of practice down to a science and can give information of the utmost value to the general practitioner. Read this article carefully—and be on the lookout for the next one.

A NY work, however important and necessary it may be, is deprived of half its usefulness when it is not systematized. No matter how carefully and nicely a surgeon may do his work, the result, gratifying though it may be both to surgeon and patient, is rendered doubly valuable by careful recording and classifying. Doing this, at the end of a period of years, one has tabulated records to which instant reference may be made and exact conclusions reached—a result obtainable in no other way, and as gratifying to the surgeon as it is valuable to his associates and those to whom he is directly responsible.

Not all men are gifted with the ability to arrange and classify; the dull routine of business does not appeal to them, their education has not prepared them for this detail work, and their brains refuse to move along new and unaccustomed grooves.

But, it is along just these lines that the exigencies of big business demand of its servants that they shall move, and many costly trials have been made to find men who, in addition to the highest grade of technical surgical skill, possessed also the rare ability to direct and care for business details entirely outside the province of a surgeon.

Little by little, by a slow process of "feeling out," by repeated careful trial and investigation, a class of surgeons has been evolved who are exactly fitted to the duties of such a position; and it is with these men—who may be termed corporation-surgeons—and their work that this article is intended to deal.

Corporations Developing New Surgery

Inasmuch as the great corporations are responsible for many great advances in methods, both commercial and social, they are largely to be credited with this advance. So, too, these large concerns must be given credit for the origin of a new class of surgeons—men who are gifted with technical skill of the highest order combined with a business ability and diplomacy that is rare in disciples of Aesculapius, yet which in

these days is recognized as an absolutely integral factor of success.

It seems to be the usual and inevitable result of an education in medicine that a man thinks, feels, and acts only along professional grooves, rendering him utterly unable to cerebrate along business lines. The exceptions to this rule are remarkably few and will explain why there are comparatively few wealthy physicians, and such a vast army of only fairly financed and even poor men in the profession.

The Requirements for Success

The corporation singles out and engages the surgeon of proven professional and business skill—one who also must have the rare ability to associate diplomatically with all classes and grades of men, from the humblest "hunkey" to the urbane, polished attending man. More of a commendatory nature might be said about the corporation-surgeon, but the foregoing will serve to indicate what he is and to show the qualities necessary to the fulfillment of the duties of the position.

The question now naturally arises, "What are the duties which require such unusual and diversified skill?" Well, it is the object of this paper to set forth a nebulous picture, a faint shadowy concept of a few of these duties; for, naturally, it would be an utter impossibility to enumerate them all, since they are not as yet known, new situations arising every day, that require instant and trained decisions, and the result of which will form the precedent for future incidents of a similar nature.

"Oh," you will say, "I have the same factors arising in my work every day."

Yes, my dear doctor. all very true, but your decision and judgment are based on your professional training of years past; the corporation-surgeon, on the other hand, bases his decision, not only on professional training, but on a firm knowledge of the legal relations existing between employer and employee, on the man's future usefulness as a corporation-unit, on the mental caliber of the patient, on his social and domestic environment, and even more-for, in every decision the corporation-surgeon must bear in mind that his action must subserve the highest interests both of employer and employee, and that his decison will be subjected to the cold white searchlight of trained business minds, while he, and he alone, will be held strictly accountable for the outcome.

It is not of recent growth, this great work—some concerns have been caring for their employees for twenty years, and today all realize the importance of careful systematic methods designed to produce the highest efficiency in results.

The manner in which this work should be carried on has been subjected to many changes, all details of which had to subserve business expediency; and they have been determined by the circumstances arising from individual cases or classes of cases.

The foundation of the whole structure is, of course, good surgery, and this is the sine qua non that stands preeminent. An obstacle soon arose, however, in the discovery that, although a good surgeon, a given man was not qualified in other ways to cope with the needs of the position. This necessitated change, and it was only by repeated trials and experiments that the right men eventually were found. Once found, though—ah, that surgeon held a lifetime position and, in due time, had his assistants, who, in turn, were trained to the way they should go, or, having proven unsatisfactory, were dropped from the service.

It will be interesting to note the remarkable changes which have taken place as a result of repeated changes in methods used—all with the same end in view and yet, so different in manner of accomplishment. That the matter may be more clearly understood, a pen-picture of the old and the new methods will be given true in every detail and free from exaggeration, so that the reader may grasp the full import of the term "business-expediency," and judge what progress has been made by the application of this factor.

The Old Way in the Shop

For the sake of convenience, the following will be called "the old method"—not that it is so very old, for it has not been many years ago when it was the accepted method, but simply in order to give it a name by which it may later be designated.

Tom Jones was a first-class machinist, and for fifteen years had worked at a lathe, whose busy whirr day after day was music to his ears. It was, indeed, the only music to which Tom had a chance to listen, save possibly the laughter of his children, for wages were not any too high, and Tom, with his family of seven, could not save much; and when the rent was paid and the grocer's bill settled there was not much left, and that bit usually went for little shoes and stockings.

On this particular morning, Tom had some tools to grind on the emery wheel and was busily engaged in this work when suddenly his fellow workmen heard a sharp cry, and, looking to see where it came from, beheld Tom with his hands to his eyes, moaning with pain and rocking back and forth.

"Did it get both eyes, Tom?"

"No, only one, but it's way in deep; and, my God, how it hurts!"

"Come on, man, me and Jerry will take you home and get the doctor for you."

The procession formed, Tom, with his hands covering his injured eye and supported by a friend on either side, in the lead. There were sympathetic headshakes and murmurs as he passed by, and one old man was heard to say, "Too bad, that's the third man in two weeks." But in five minutes after poor Tom had left the shop the interrupted work had been resumed, another man had taken Tom's lathe, and the work went on as though nothing had happened-there was no time for idleness. Arriving at his modest cottage, Tom's wife began weeping bitterly over his misfortune, meanwhile placing cold cloths on the injured eye, by the simple expedient of wringing an old towel, hastily grabbed from a nail behind the door, out of water in the family wash-basin.

"Want me to get old Doc Smith, Tom?"

"Yes, Jerry—and tell him to hurry."

"Sure—I'll get him here in half an hour, if he's home."

But Doctor Smith was not home just then, and it was over two hours before Tom's eye was cared for, the good wife having, during the period of waiting, carefully placed a large bread and milk poultice over the eye,

to ease the pain.

When the doctor came he looked carefully at the injured eye and told Tom that he had received a mighty bad injury, and that all he could do was, to keep down inflammation, and, then, if it wasn't better by next day, he'd have to see the eye-doctor and find out what he could do. Needless to say, Tom was not better next day and at last—several days later—went to see the eye-specialist. The latter promptly advised complete enucleation of the eyeball, inasmuch as it was badly infected, sympathetic ophthalmitis even then threatening the other eye.

-And Tom Lost His Eyes

It's the old story, and one that in former days repeated itself over and over—Tom lost both eyes and became dependent on the community for his support, eventually learning to make brooms and earning a precarious living in that way.

And who paid the bills? Why, Tom did, of course! Didn't Tom get hurt? Wasn't it Tom's eye that had to be operated on? Well, then, why shouldn't Tom pay the bill?

Now, you'll say, "This is a grossly exaggerated story, told for illustrative purposes.' No, my dear doctor, it is true in every detail, and not only true, but typical of hundreds of cases under the old régime. There were some few laudable exceptions, when, possibly, the employer paid the man's rent for two months, or three months, "inasmuch as Tom had been working for him for twenty years"; or maybe the employer's wife sent ten dollars' worth of groceries to "help out." But all of this was either open charity or because this particular Tom's employer had a really soft heart. However, it was not the accepted and established plan-all Toms were not treated in that way.

Let it be remembered that people's hearts, in those days, were just as big, just as warm as they are today, but the individual's desire, prompted by his heart, was not able, alone, to let him do all he might wish to do. Besides, if he took care of one man, he should very properly take care of all of his injured men and—well, he could not see his way clear

to assume that burden.

The preceding is significant of the times in which it happened and was undoubtedly all that could have been expected under then existing conditions. It must not be thought, as said, that all employers followed this plan, because there were exceptions; but the main fact that stands out clearly is, that there was no settled plan-it rested entirely with the employer and depended altogether on the circumstances surrounding the accident as to what was being done. Many-mostemployers did nothing for their disabled workmen; they merely set it down as an "accident," which happened through no fault of theirs, and therefore they were in no way "responsible." Others did, indeed, exert themselves to the uttermost, but only for the time being, entirely forgetting the future of the victim of the accident, his family, and their prospects.

The need of some plan to provide for this contingency was dimly felt, but no one felt strongly enough on the subject to make any attempt at organizing and perfecting a general method that would adequately provide for the care of victims of accidental injuries in discharge of factory and shop duties.

The unfortunate part of it all was, that, where one man was cared for and given such help as was needed, a dozen others were unprovided for, and this soon provoked adverse criticism and dissatisfaction among workingmen. This led to even worse things happening, such as damage suits and legal actions of various sorts. Some factories were even spoken of unfavorably by workingmen, who warned their fellows that such and such an employer was "no good," and this resulted in difficulty for many employers in getting men to work for them, often necessitating the payment of an extra large wage in order to fill certain positions. But, again, other factories were victims of unscrupulous artisans, who, for the most trivial injuries, demanded help and assistance for an unwarranted period of time, thus making it doubly hard for a worthy man to get such help as he required.

At last, little by little, a change began to become apparent. First one employer made an advance, then others, profiting by his example and success, followed his lead, and, so, in the course of years, custom so shaped itself that any employer who did not care for his disabled men found himself much disliked, and thus was forced to mend the error of his ways.

The Modern, Better Way

As an example of the improvement which these conditions have undergone the following incident may serve to illustrate:

It is Bill Brown who now is grinding a tool at the emery wheel. Bill Brown, however, has on a pair of heavy goggles, to protect his eyes against the possibility of harm. Despite all his precautions, however, a fragment of the tool flies up and strikes the glass with such force that it cracks it and drives a splinter of the glass into his eye. Bill, startled, cries out, and removing the goggles, which have saved his eyes from a far worse injury, makes his way to the foreman.

"Got something in my eye, Williams."

"That so, Bill? Come on with me, quick."
Bill is lead to the first-aid cabinet fixed to
the shop-wall and there a piece of sterile
gauze is placed over the injured eye and
fastened with a gauze bandage. The foreman then conducts Bill to a room, usually in
the same or a nearby building, and by the
time they reach this place—which is called
the hospital—a surgeon who is regularly
engaged for this work and does nothing else,
takes him in hand. After a careful examination, the surgeon says:

"Too bad—it's a penetrating injury and we shall have to see our eye-man. You'll

have to go with me to the hospital, Bill, for a few days' stay."

So, Bill gets on his coat and, accompanied by the surgeon, steps into a waiting automobile and starts for the hospital. The oculist, who is awaiting them, by means of a slight operation removes the piece of glass.

"About a week, my man, and then you can go back to work."

Bill accordingly stays in the hospital a week and is seen daily by the oculist, and all requirements are attended to. At the termination of the week, he is discharged and goes back to work—with two good eyes, thanks to prompt care and careful attention by the best medical aid money could secure, and all without any expense to him.

What a difference between the experience of Tom Jones and of Bill Brown, of Bill of today and Tom of former years! And all brought about by the constant and irresistible march of progress, spurred onward by that potent, but silent force, public conscience, and fostered by the great enlightener, education. It was to be, and it is. For, so it was decreed. But what of the personal factors concerned in bringing about this change—what have they done and what are they now accomplishing?

How This New Plan Works

These questions are best answered by telling of the general plan which prevails among corporations and the general methods by which this work is handled. This plan varies in different plants and in accordance with the individual views held by the instigators, but in the main facts one plan resembles another very closely.

In the first place, the foremen are called together and instructed to tell the men working under them of the advantage and necessity of reporting at once any and every accident. The foremen do this, because they often have under their control workingmen speaking foreign languages, and it is necessary to talk to them in their own tongues. Some of these foremen are wonderful linguists, speaking six and seven languages fluently, while having some knowledge of first-aid surgery as well.

The first-aid cabinet, which is installed, contains bandages, gauze constrictors, simple medicaments for burns, and the like, each and every article plainly designated by number, while a full description of the uses to which it may be put is contained in a pamphlet also placed in the cabinet.

Then a welfare department is organized, usually under full charge of some clever, well-

informed office-man, who knows the workmen and whose special duty it is to keep track of every injured man or woman, from the time anyone is hurt until he resumes work. Many of the companies make a full and complete examination of the applicant for work and keep a record of this examination for future reference, for it occasionally happens that some clever rascal claims permanent disability from an injury received in childhood's happy hours and the claim is paid! Preliminary examination does away with this and is be-

coming more generally practiced.

Then comes the hub of the wheel, the sine qua non, the most important factor in the whole plan-the surgeon. This man must be a thorough master of surgical technic and especially of emergency methods his judgment and trained intelligence must make a decision that is irrevocable, yet, must be tempered with charity and mercy. While, through it all, he must have a keen mental eye on the future, for, if he sould amputate when conservative treatment would have been done better for the future welfare of his patient, he has been remiss in his duty and will not hold for long the important post which he occupies. His trained eye and mind must detect instantly the best method of operative procedure and as instantly apply it. woe unto the unfortunate foreigner who says, "Meester doktor, no can work"; for, malingerers are cast into outer darkness at once.

Immediate Care Imperative

The injured employee is cared for at once, remember that. It's a rule that may not be broken, and many a big fellow presents himself shamefacedly before the surgeon when he has received some trivial injury and wonderingly accepts as careful an examination and dressing as if he were badly hurt, only to be told to return again the next day for a

renewal of the dressing. However, the example of one or two cases of septicemia soon convince the workers that the reporting and getting dressed of even the most trivial injury is the right thing to do, so that cases of bloodpoisoning are almost unknown in corporation-surgery.

Patients for hospital care and attention are instantly transferred by automobile or ambulance, and if the work is outside the realm of the general surgeon, a special regional surgeon is called to do the operation. It is not a question for conference or consultation: the surgeon has carte blanche to do everything for the best interests of his patient: and that.

too, at once.

Although it takes an experienced surgeon to operate, it takes a much more experienced surgeon to know when not to operate—to know—yes, and to have the courage of his conviction—when to wait and, little by little, carefully trimming and stitching, allowing and assisting nature to do its best, at least to save a useful finger or two, and to experience the intense personal satisfaction of seeing his patient return to his original job and earn a full day's wage. And that is the acme of good surgery. But this can not be taught, except by years of varied experience and the practice of thorough, consistent, cleanly methods of operative procedure.

This, then, is a general view of this great and important branch of surgery, told in general and unbiased terms and based on the personal experience of the writer and of a host of warm friends who are corporation-

surgeons all over the United States.

More specific illustrations will be given in later chapters, together with details of the emergency-methods used. These latter, it is believed, will prove of value to the general practitioner as the last word in emergencysurgery.

[To be continued.]



Modern Treatment of Nasal Catarrh

By Burton Haseltine, M. D., Chicago, Illinois

N INVITATION from the editor to write upon the subject of catarrhal deafness has resulted in the selection of this topic for two very practical reasons. First, the treatment of nonsuppurative deafness, in the great majority of cases, implies the problem of dealing with nasopharyngeal catarrh. This reason is well known; the second, however, is less familiar, namely: under modern methods, such conditions are far more amenable to treatment than they were formerly, and that, too, by measures available to the physician in general practice. This does not mean that all forms of nasal disease are easily curable; still, it signifies that, with a little attention to differentiation and a little skill in relatively simple procedures, the physician in general practice can obtain gratifying results in cases that he has been inclined to shun.

Every doctor has occasion to remark upon the frequency with which people otherwise in a normal state of health complain of what they call catarrh. Indeed, there are but few people who when questioned will fail to acknowledge that, at least, they have a mild catarrhal trouble. Usually the particular climate or locality where the individual resides is blamed for the difficulty, as being too high or too low, too near the water or too far away from it. There is probably no habitable part of the globe that is not said, by somebody, to be "bad for the catarrh," and, if Commander Peary were questioned, he no doubt would aver that it was so at 90 degrees north latitude.

What Is Meant By "Catarrh"

When we seek to discover what in the popular mind is the meaning of the word "catarrh," we find that it applies to almost any chronic nasal abnormality, but especially to one accompanied by some form of discharge. This discharge may be anterior or posterior, and it may vary from a nearly normal secretion to the most extreme ozena. Any disturbance of the proper secretory balance, of course, results in unnatural accumulations in the nose, which, with the inevitable infection, produce what the patient calls catarrh.

One hears many speculations as to why so many people "think" they have catarrh; however, no one seems to have hit upon the very obvious reason, na mely: that—it's true that they have.

A very large percentage of adult people do, indeed, suffer from some form of nasal infection, and the neglect of this condition is the cause of more trouble than is generally recognized. Such trouble not only includes obvious local damage, such as deafness and sinus disease, but also toxemia, rheumatism, and gastrointestinal difficulties not so easily traced to their source. No case of selfdiagnosed catarrh should be dismissed as trifling before a determination of the amount of actual pathology has been made. This can be done with sufficient accuracy by anyone with a good knowledge of general medicine plus enough special training to make an average rhinological examination.

General Medicinal or Surgical Measures Rarely Cure

It thus becomes a question of differentiation. If the patient's general metabolism is faulty, this must be corrected, whether local measures are employed or not. It is rare, however, to find a nasal infection, other than a luetic one, that will yield to general therapeutic measures alone. Long-established infections and local tissue changes usually make it impossible to eliminate the disease without direct attention to the parts involved. Commonly there are structural abnormalities requiring surgical correction before complete relief is possible. But, there is a large field for local nonsurgical measures, both in cases where operation is not required and as treatment following operation, since it is but rarely possible entirely to cure the disease by means of surgical measures.

The crudity and the futility of ordinary nonsurgical measures directed to the nose is notorious. Everyone appreciates the uselessness of the nasal spray and vaporizer, but many doctors still employ them in a sort of helpless way, just to be doing something.

Much Can Be Done by Simple Procedures

It will be a comfort to such physicians to learn that by the mastery of a few simple procedures and without surgical skill they can accomplish real results in many of these "catarrhal" cases.

To this end, it is essential first of all to make a complete inspection of the interior of

LEADING ARTICLES



Fig. 1. An anteroposterior view of the head, showing the extent of the tampon vertically, applied as recommended by Dr. Haseltine.

the nose and nasopharynx by means of artificial light and suitable specula. The ability to do this can be acquired by any physician, with little difficulty. In the next place, it is necessary to cleanse the nasal spaces, and this can not be done by the mere spraying of the anterior nares.

The nasopharynx and posterior ethmoid region can be cleansed only with the aid of instruments that will throw solutions into

the vault and high into the middle meatus, which receives the drainage from the largest of the accessory cavities.

It must be understood that chronic catarrh never results from pathologic states limited to the nose alone, except in obvious structural deformities. Some of the accessory cavities are usually involved; the most common, of course, being the ethmoid labyrinth.

The Ethmoid Labyrinth the Point of Attack

It is to this region that treatment must chiefly be directed in order that the best results may be obtained. While the treatment is primarily a problem of cleansing and drainage, it is now possible to go further than this and to employ

more active means in combating these infections.

The profession is indebted to Dr. J. I. Dowling, of Albany, New York, for the idea of tamponing the nose with certain solutions that exercise a curative influence upon mucosal infections. Doctor Dowling has conducted an interesting series of experiments to learn the effect of various silver solutions employed in this manner, and has found that a 10-percent solution of argyrol is best adapted for clinical use.

This method has now been regularly used by a considerable number of rhinologists during more than five years, and its value is established beyond question. Not only is it efficacious in the treatment of nasal and tubal infections, but Doctor Dowling has shown it to be applicable in those ophthalmic conditions now known to result from sinus disease.

In view of this wide range of usefulness, together with its sim-

plicity of application, this procedure should be better known among general practitioners. No better description of the manner of proceeding can be given than the following extract from an article published by Doctor Dowling in 1910:

"Essentially, the method of treatment is, to employ intranasal tampons of such length and size as will snugly fit between the middle turbinated body and the septum, and extend



Fig. 2. Partial view of tampon, partially enveloping the ethmoid turbinal.



Fig. 3. Same head as in Fig. 2, but without the tampon.

from the anterior portion of the nose to the choana posteriorly. These tampons should first be saturated with an aqueous solution of argyrol of 40 grains to the ounce. Through capillary attraction, they will deplete the

proximate soft tissues and drain the ethmoid cells and other sinuses. In order to drain the maxillary sinuses, the tampons should be placed under the scroll of the middle turbinated body and above the upper part of the inferior turbinated body. However, since the soft tissues are usually greatly engorged and hypertrophied, they in themselves will assist in the capillary attraction, and it frequently is only necessary to place the tampons between the middle turbinated body septum. The tamponades should be made sufficiently large to be snug, but not so sizable as to occasion pain in their placing. They should remain in situ for from ten minutes to half an hour, and very occasionally an hour.

"The primary effect is, irritation of the conjunctive, sneezing, and running from the nose. Upon removing the tampons, they will be found bleached, either in spots or throughout their extent. This is due to the action of certain germs upon the solution employed to saturate the tampons.

"Subsequent to the withdrawal of the tamponades, the nose should be thoroughly douched by means of a compressed air apparatus or through use of postnasal or intranasal douching. Any mild alkaline solution is acceptable for the purpose. The final step of the technic is the use of some bland oil."

Doctors Hubeny and Hartung, of Chicago, have been good enough to make a number of roentgenographs for the writer, showing these tampons in place. In the cases photographed, an inert bismuth paste was added to the solution, for rendering the view clearer.

Figure 1 is an anteroposterior view showing the extent of the tampon vertically. Figure 2 is a lateral view of the tampon partly enveloping the ethmoid turbinal. For comparison, a photograph of the same head, without the tampon, is shown in

Figure 3. Figure 4 is a lateral view of another case, with the tampon placed far back into the posterior ethmoid spaces. In this figure a line is drawn around the area of the tampon. It will be noticed



Fig. 4. Lateral view of another head with tampon placed far back into the posterior ethmoid space.

that it extends backward as far as the sphenoid sinus and that its upper portion reaches to the cribiform plate. By comparison of these photographs with a chart of the intranasal structures, one can form a correct idea of the location.

What the General Practitioner Can Do in the Treatment of Chronic Diseases

By George F. Butler, M. D., Kramer, Indiana

Medical Director of The Mudlavia Sanatorium

EDITORIAL NOTE.—We believe that this series of articles (of which this is the first), to be contributed by Doctor Butler, will be one of the most practical and helpful ever offered to the readers of "Clinical Medicine." The Doctor purposes to give just what the general practitioner wants to know in order to treat the "chronics" successfully at home.

HIS is the first of a series of articles which I shall contribute to CLINICAL MEDICINE on "What the General Practitioner Can Do in the Treatment of Chronic Diseases." I know that by writing what I intend to I may perhaps divert a certain amount of business from the sanatorium of which I am medical director, as well as from other similar institutions. But, for a long time I have been convinced that the average general practitioner, by expending a little money in enlarging his office by one or two rooms and installing relatively inexpensive equipment, can treat successfully a large number of chronic diseases, where now he is obliged to send these patients to some sanatorium; thus saving money for his patients, besides enhancing his own reputation and increasing his income.

Every honest physician desires to do the best that he can for every chronic sufferer that consults him; if, however, he does not know how to treat chronic diseases as they should be treated or if he has not the facilities for their proper treatment, he is bound, in all justice to his patients, to refer them to some reliable medical institution where they

can be properly treated.

Now, as I have just said, the great majority of these cases the general practitioner can treat himself, provided his office is equipped so that he can give simple hydrotherapeutic and certain electrotherapeutic treatments.

As to electrotherapy, of the various currents, or modalities, being used in medicine at the present time, the following may be men-

tioned:

Autocondensation (high-frequency), Diathermy (high-frequency), Fulguration (high-frequency), Spray of Effleuve (high-frequency), Ozone inhalation (high-frequency),

Vacuum electrodes (high-frequency). Static spark (high-frequency), Vibratory massage, Pneumo massage, Suction, X-ray therapy, Straight galvanism, Surging galvanism, Slow sinusoidal current. Rapid sinusoidal current, Surging sinusoidal current, Multiplex sinusoidal current; Compressed air,

Therapeutic light, Static electricity (in its several forms).

Now, it is true that not every practitioner who is employing electrotherapeutics in his practice makes use of each and every one of these agencies. Neither is the surgeon employing every one of the thousands of surgical instruments made. From my experience, however, I am firmly convinced that the general practitioner who is anxious to render the best and most modern forms of treatment should include practically all of the afore-

mentioned agencies in his work.

The average "chronic" has, as a rule, taken so many drugs and in such large doses, by the time he reaches the physician who is competent, ready, and willing to apply the proper treatment, that he is in a condition where he needs, for a time, elimination and physiologic or physical measures. Of course, I am not belittling the value of drug-medication, for, the right drugs properly administered, and in the proper dosage, are indispensable. I shall have more to say on the drug-therapy of chronic diseases later.

It is also true that in some instances two or more of the above-mentioned agencies might be used-and are being used-for the treatment of similar conditions, but (to refute the possible argument, "Why put in two agents for the same treatment?") I can call attention to the fact that there are, for instance, dozens of drugs being used for the treatment of the same disease. Again, there are hundreds of surgical instruments. all of which are devised for one certain operation. In other words, "What is good for Jack is not necessarily good for Jill."

Considering the dollars-and-cents side of this question, is it not true that the average practitioner comes in contact with a case now and then which arouses his professional curiosity, but, to his chagrin and annoyance, the patient comes only once, while, as a general rule, ethics forbids the following up of the case? This is particularly true where the physician writes out a prescription and it is filled at a drugstore. On the other hand, the physician who dispenses his own remedies, and has an office-equipment enabling him to employ the physical modes of treatment, and who personally administers the treatments, will have better control of his patient and be more able to help him than the doctor who merely asks a few questions of his patient and then writes a prescription.

To the physician equipped to treat chronic diseases properly, the patient will return often for subsequent treatments; and, while the charge for each treatment will be more than for an ordinary office-call, it will be worth much more to him, and he is usually glad to pay the difference. Besides, it can readily be seen that the physician, by doing business in this way, can get into closer touch with his patients, to say nothing of increasing his

income.

Electrical Equipment Required

Now, to get down to the practical business side of the question, it hardly seems possible, but it is true, nevertheless, that all of the aforementioned physical therapeutic treatments, with the exception of the static currents, can be given if one possesses the following combination x-ray and high-frequency outfits: the Victor No. 4 or No. 7 outfit; the Victor No. 62 combistat: and the Victor therapeutic lamp. The cost of such an equipment (exclusive of the apparatus for static currents) would be in the neighborhood of \$650; this outlay including all the necessary accessories. Such an equipment would place at the disposal of the physician an x-ray apparatus sufficient only for radiotherapeutic treatment of the extremities and for giving superficial treatments, but would not be fitted for heavy radiographic work.

The general physician can see the advantage-or disadvantage, as the case may beof having diagnostic rays available, such as those yielded by the Victor No. 4 outfit.

In addition to the electrotherapeutic apparatus mentioned above, the physician's office should have at least one electric-light cabinet. Light, air, and water represent hygienic and curative factors of the greatest importance. The process of metabolism is influenced tremendously by light; the body requires light for its health and sustenance. The most vital of physiological processes, respiration, both cutaneous and pulmonary, is directly affected by the presence or absence of light.

The electric-light cabinet enables us to make practical use of the various physical agencies which are included in light. The light of the electric arc has approximately the same spectroscopic composition as sunlight. The light of the incandescent globe is rich in thermic rays. Thus we are prepared to look upon the electric-light cabinet as a valuable addition to our therapeutic armamentarium, combining, as it does, the power of the various rays in the destruction of disease-germs, in the reestablishment and stimulation of physiological metabolism, and in the performance of the many important functions of light in and on the animaleconomy.

It would take me beyond the confines of a short résumé to discuss in detail the minute phases of our subject. Suffice it to point out some of the effects which may be produced by the proper use of the light-cabinet.

Uses of the Electric-Light Cabinet

As a producer of copious diaphoresis, the electric-light cabinet rivals the Turkish bath. Winternitz, probably the greatest authority on the subject of thermo- and hydrotherapy, states that since the introduction of the lightcabinet he has practically abandoned all other methods. The light-bath produces sweating, without intense heat. The lightbath is, therefore, indicated in all cases for which other apparatus are adapted. Whenever cutaneous excretion is to be stimulated, the electric-light cabinet will do the work. Either will alter, stimulate, and rectify metabolism promptly. Either will augment absorption, stimulate the appetite, and help the organism to rid itself of all kinds of deleterious gases, vapors, and fluids.

The following statistical list of diseases. with the percentage of cured cases added, is taken from the reports of one of the numerous German phototherapeutic institutions, and shows the clinical importance of the lightbath more eloquently than any physiological and therapeutic argument could possibly demonstrate it. The cases were all treated in the electric-light bath: Light, in fact, occupies the position of the universal disinfectant, because without it the purification of river-water would be inconceivable. There is no longer any doubt that the pathogenic bacteria are affected by the light. Geisler exposed a culture of typhoid-

MANUE OF PIOPAGE	NY 40	0 1	27 1 7 1	37 D 1
NAME OF DISEASE	No. of Cases	Cured	Much Improved	No Result
Rheumatism	. 116	81	30	5
Gout	. 86	53	33	
Gout, deformative	. 3	4.4	2	1
Neurasthenia and hysteria	. 82	45	31	6
Lues	. 64	46	16	2
Obesity	. 62		50	12
Asthma	. 49		40	9
Gonorrhea and consequent disorders	. 38	20	15	3
Heart disease			36	
Fatty degeneration of the heart	. 33	20	13	
Sciatica	. 32	28	3	1

The researches concerning the biologic importance of life in conjunction with the functions of the human organism have, indeed, revealed many interesting facts. It has been shown that relative degrees of light will affect the contractility of protoplasm. The red blood-corpuscles, the direction, speed, and duration of the movements of certain infusoria and diatomes are directly influenced by light. The muscular excitation and activity of frogs has been shown to be much more energetic under the influence of light than in the absence of light. It has been proven that the quantity of coloring matter in the red blood-corpuscles increases and decreases in accordance with the amount

bacilli to the light of a thousand-candle-power arc-lamp, and after three hours of illumination the growth of the culture had been practically suspended. Aufrecht inoculated various animals with the bacilli of milzbrand, diphtheria, and tuberculosis. The inoculated animals that were kept in the dark died within two or three days; those that were exposed to the light usually resisted the effects of the inoculation. Many other facts could be added to those here mentioned. Those who are interested in the subject will find a great deal of information from the writings of Below, Kattenbracker, Winternitz, Kellogg, Bier, and, above all, the classical writings of Finsen. See table following:

NAME OF DISEASE	No. of Cases	Cured	Much Improved	No Result
Bronchial catarrh and emphysema	. 28	10	18	
Neuralgia		6	17	1
Ulcus cruris varicosum	. 23	10	7	6
Stomach and intestinal catarrh	. 20	5	15	
Mild affections of the liver	. 20	10	7	3
Affections of the knee-joint	. 15	10	5	
Nephritis			15	
Lumbago		14	* *	
Catarrh of the ear, and deafness		1	9	4
Nasal catarrh, and affection of the larynx	. 13	5	8	
Anemia	. 12		12	
Diabetes			10	
Headache		5		
Chronic constipation		1	3	
Professional illnesses	. 3	2	1	
Erysipelas		3		
Influenza		3		
Contracted scars		2		
Ulcus molle		1		
Skin diseases (herpes, etc.)		24	33	6
Tabes			7	33

of light to which the animal body is exposed. That light is fatal to bacterial life has been suspected by many observers long before the time of Finsen. As far back as 1870, Esmarch exposed his surgical instruments to the rays of the sun for the purpose of disinfection.

Excellent electric-light bath cabinets, large enough for a physician's office, can be purchased at from \$95 to \$150 each.

A hot-air apparatus for the extremities and other regions of the body, and, if possible, a hot-air body-apparatus, should be a part of the equipment of the office of every up-to-date doctor. Treatment with superheated air is invaluable in many chronic diseases, notably those of the kidney, liver, blood, skin, and joints. The sphere of usefulness of hot-air therapy is daily widening, and the progressive physician will employ this form of treatment wherever it is indicated. Such an outfit for ordinary uses can be procured for \$100, and down to as little as \$15.

In this connection, I would recommend the employment of cups. One who has not resorted to dry- and wetcupping would be astonished were he to see what results, in certain cases, I have obtained by this method. In addition to a set of drycups, I would earnestly advise the purchase of Bier's cupping apparatus for the foot, knee, elbow, hand, and arm. This can be had for \$60 complete (Betz), Of course, it is expected that every physician will have a blood-pressure indicator.

Hydriatic Measures

Now, lastly, the physician should have one room where certain hydrotherapeutic measures could be given; simple measures, such as the application of compresses, lavage, enteroclysis, irrigation of the genitourinary canals, and so on. The general practitioner, however, will employ most of his hydriatric measures in the home of the patient, and the physician himself should be perfectly familiar with the rationale and technic of the yarious procedures, so that he can give the treatment, or, what is better still, if his practice justifies it, have a competent nurse give the treatments under his direction. The procedures which are of value in the treatment of chronic diseases are the following:

1. Ablution: a useful preliminary to more active hydriatric procedures. In such cases as anemia, chlorosis, phthisis, it is of great value; also in neurasthenic cases which do not require more heroic measures. In the more severe cases, it offers a gradual introduction to the douche and other more active

2. The half-bath is one of the most universal hydriatic procedures we have. In chronic diseases, after, for instance, the wetpack has produced dilatation of the superficial cutaneous vessels, the half-bath is a necessary sequel for the purpose of maintaining the tone of those vessels.

The affusion is an excellent substitute for the douche in chronic diseases, if it is administered with care and precision as to temperature and the patient's reactive

capacity.

4. The drip-sheet, or sheet-bath, is applicable to many chronic ailments, especially as a substitute for the douche, which can be had only in institutions, viz: as a tonic in chlorosis, anemia, and neurasthenia; as a derivative in intestinal catarrhs; as a revulsive and alterative in melancholia, hypochondriasis, neuralgias; and in pulmonary and bronchial diseases.

The flexibility and simplicity of the sheetbath commend it especially. It is probably the most flexible hydriatric measure known.

5. The cold rub is useful in the anemia of feeble persons, phthisis, and other conditions of defective hematosis.

6. The wet-pack is extremely valuable in all chronic cases in which defective tissue metamorphosis is a prominent element, as in diabetes, rheumatism, gout, some disorders of the digestive apparatus, anemia, and chlorosis. In the functional neuroses, the wet-pack offers a means of allaying irritability and, if succeeded, as it should be, by a half-bath, douche or other active mechanicohydriatric procedure, it will refresh the nervous system, improve tissue change and the blood-making function, and invigorate the circulation.

7. The wet compress, hot or cold—according to indications—is perhaps more universally employed than any other hydriatric procedure. It will be found useful in many chronic conditions, such as chronic rheumatism, sciatica, lumbago, chronic endocarditis, and in the cardiac neuroses.

8. The hip-bath is indicated in paralysis of the muscular fibers of the bladder and intestines; in prolapsus ani, spermatorrhea, prostatorrhea, proctitis, hemorrhoids, impotence of men arising from muscular debility, and cutaneous anesthesia; in weakness of the uterine ligaments; prolapsus uteri; leucorrhea due to chlorosis and menostasis; some forms of passive hemorrhages; liver hyperemia; muscular atony of gastric and intestinal coats, as manifested by constipation, flatulence, and

These are some of the hydriatric measures that are indispensable in the treatment of many of the chronic diseases, and the physician should employ them when indicated, either in his office, if equipped for it, or in the home of the patient. It will behoove every physician who is desirous of successfully treating chronic diseases thoroughly to master the technic of these hydriatric procedures, familiarizing himself with their phys-

iological actions, so that he may intelliently treat his patients at home, instead of sending them to some water-cure establishment, in many of which, moreover, the various hydriatric procedures are anything but scientifically administered.

On the value of hydrotherapy in chronic diseases, we have the testimony of many teachers, among whom is Prof. F. A. Hoffman, of Leipzig, who says: "Cold water is a therapeutic agent by the correct application of which we may most surely, and without danger of reaction, exercise and invigorate the nervous system; and herein I seek its fundamental significance in the treatment of all possible internal diseases. I am convinced that in time all chronic diseases of the organs will be drawn into the domain of the bathtreatment."

I have thus far endeavored to impress upon you the importance of "preparedness," of being fully equipped, not only with the necessary apparatus, but with knowledge, so that you can treat chronic cases successfully at home; for, if you can not treat them successfully yourself, it is your duty, as I have said before, to send your chronic patients to some well-equipped institution where they can be properly treated.

So far as your material equipment is concerned, you can procure all that is necessary for from \$900 to \$1200, and you could make no other investment of such an amount that would yield you so large returns in your

practice as will this.

How to Manage Chronic Diseases

Now that we are prepared to take proper care of our chronic patients when they come to us, I will proceed to call your attention to the following important points in the management of chronic diseases, namely:

- How acute diseases may become chronic;
- 2. Focal infections as causes of chronic diseases, and how to detect them;
- 3. The condition of the intestinal canal in chronic diseases, and how to set it right;
- Regulation of diet, and what is to be accomplished thereby;
- The importance of elimination by various routes in the treatment of chronic diseases;
- 6. Exercise, artificial and natural, and how to secure it;
- Rest and recreation as necessary aids in the treatment;

- 8. Occupation and habits as contributing factors:
- 9. The influence of psychotherapy in the treatment of chronic diseases.

How Acute Diseases Become Chronic

The two tendencies, that of chronic disease to assume an acute form and that of acute to continue in a modified form as a chronic ailment play a large part in differentiating remedial procedures. Chronic bronchitis, for instance, following an acute inflammation of the bronchial mucous membrane, a perversion of nutrition, yields but slowly to treatment. The irritant may be some toxin, some peculiar condition of the mucous membrane, or there may be a constitutional condition that keeps up an abnormally active state of nutrition in the membrane over which an inflammatory storm has gone and which has thereby been altered, as in suppressed gout or in syphilis; and the methods to be applied to these cases must accordingly vary from each other and from the normal.

There are two lines of procedure, the first consisting of general measures, and the second, local measures. In all cases of persisting organic changes induced by an acute disease, it is of the greatest importance to employ the constitutional treatment. There seems to be an incapability of effecting perfect repair in an organ that has once been injured. Sometimes a low, persistent cell proliferation will result from mere general debility, notably in the "strumous." Here are indicated warm clothes, good food, care of the general health, and suitable hygienic environment. As nearly perfect physiological rest as can be had for the part is absolutely necessary; for, if exercised, it repairs itself with difficulty or not at all. It is exercise that retards perfect recovery in parts whose functional activity, like that of the kidneys or the valves of the heart, is essential to the continuation of the organism. An attack of chronic nephritis would disappear soon and utterly if the kidneys could be made to cease their work, and mitral disease would occur infrequently if the vela of the mitral valve could be given a complete rest after an attack of acute rheumatism involving the endocardium.

When necessary, as in acute affections of the stomach, nutriment may be injected through the rectum, thus affording rest to the usual channels. In acute cerebral congestion, or meningitis, the brain should be rendered as inactive as possible. Inflamed joints should be forced to rest, and so should a fractured limb. Rest for the body is as necessary in these cases as rest for the nervous system is necessary after a steamboat disaster or a railroad wreck.

Often the repair of some part which has suffered from an acute infection is retarded by some general condition, such as is found in rheumatism, gout, and syphilis. Here, the constitutional states limit the local action, and an unfavorable activity persists. When such a general condition is disclosed and it is found that it is working against the patient's recovery, that general condition should be treated. The very first step toward satisfactory results in such cases is, that we recognize this necessity and treat the constitutional states that lie beneath the persistent local affection. When it happens that the correct treatment has been a matter of accident, as sometimes occurs, the relation of cause to effect is not clear, but in general we attempt to repair an injured organ and restore it to use by the measures already cited.

The immediate object is to aid the recuperative power of the system by inducing the most favorable hygienic conditions; to free the injured part as much as we may from any functional movement that can be dispensed with; to improve the general nutrition; to bring the injured part as closely as possible to a state of complete physiological rest; in short, to induce an equal condition of all the parts, not only in power, but also in function. The existence of the organism is threatened by any lack of balance between one part and the other parts.

Fatty degeneration of the heart, which is sometimes consequent upon disease of the coronary vessels, may attack one who in general is active and strong. Such a person, on account of the ease with which he uses his muscles, is far more prone to force his diseased heart to a fatal point, from sheer adynamy, than a general invalid would be. A similar result may be brought about through aneurism. As no chain can be stronger than its weakest link, the capacity of the elastic arterial system to resist distention by the retained blood is lowered to the point of the capacity of the aneurismal sac. Any increase of blood pressure might rupture the sac, with fatal results.

If any person has advanced renal disease, he is much safer if his appetite is poor and he is thus prevented from taking animal food, especially lean meat. Fortunately, the tastes of such an invalid often run toward nonnitrogenous foods. In the case of elderly people with renal disease, a distinct benefit

arises from loss of appetite, which permits the oxidation of the nitrogenized materials in the body, and these are thereby allowed to escape from the system. Should the normal appetite remain, these would accumulate, and either uremia or some other affection, an outcome of faulty metabolism, would threaten. Not soups, beef-tea, and the like, but soft foods, rest in bed, gruel, tea, and arrowroot are the proper measures here.

Wherever the general condition has no bearing on the injured part, while at the same time the part has important physiological functions, fatal or dangerous results may be expected at any moment. When there is incurable disease in an organ whose functions are important to the body, correcting the habits of the patient should be insisted upon, to the end of securing an equilibrium, reducing the general condition to a balance of all parts, to "level down"; for, this method will at least prolong life. And in convalescence from acute disorders in important organs, the relation of the afflicted part to the whole body must be borne in mind, as well as its capacity, its condition, and the danger inherent in a forgetfulness of these relations. In uremic diarrhea, for example, should the condition of the kidneys be left out of the reckoning and the flow be arrested without reopening the normal passage for the excretion of azotized matter, the result would be almost certainly a general explosion of uremia

In some systems it is inadvisable to attempt to promote too high a general condition. A chronic affliction, hidden in an important organ, may easily be uncovered and prove fatal, especially when the various viscera are involved. If, in fatty degeneration of the heart or in chronic renal disease, the line of treatment for the disease itself should be followed, without reference to the general conditions of the body, the time will come when the oversight will be sadly deplored. To "level down" and to "level up"—the one is as important at times as the other is at other times.

The tendency of a chronic disease to become acute is a matter of far greater importance than the reverse transition. An acute attack on a serous membrane may arise from a condition of chronic renal disease, the serous inflammation threatening to prove fatal. Now, if the chronic condition could have been treated in such a manner as to prevent the acute form, this danger would have been obviated. It is where the chronic becomes the acute that the great danger exists, and,

unless the situation is understood and provided for, the outbreak may come almost at any time. In a case where a victim of constitutional syphilis became a hemiplegic, from a syphilitic tumor in his cerebrum, it is nearly certain that, had the management of a syphilitic cachexia been adequate, the result would have been averted.

In general paralysis, aortic disease, locomotor ataxia, and in many other chronic diseases, the termination is often by intercurrent pneumonia. When these chronic conditions run into a state so seriously acute, the most skilled treatment is usually of little avail.

The true line of treatment of acute affections arising out of the chronic is that of prevention—they should be "treated" before they exist. To this end, the chronic diseases must be studied—their nature, their course, and their outcome.

(To be continued.)

Ovarian Inflammation

Its Treatment With the High-Frequency Current

By A. S. Tuchler, M. D., San Francisco, California

THERE is nothing which offers such a prolific field to the surgeon as the pelvic inflammatory conditions, and, yet, if the following electrical methods of treatment are made use of, the major portion of these cases can be cured without resorting to the knife.

In a previous article in CLINICAL MEDICINE (June, 1914, page 532), I called attention to the treatment of endometritis, by means of electrolysis, using the direct-current battery. There is nothing in the category of medical science which gives better results in the treatment of these chronic cases than this electrical method. But in the acute cases of an inflammatory state of the organs of the pelvic cavity, such as the ovaries, tubes or uterus, this direct-current electrolysis is absolutely contraindicated. It is here, then, where the application of the high-frequency current can be applied, with astonishing success, in relieving pain, subduing inflammation, and promoting the absorption of the exudates which form as a result of this inflammatory condition. I refer to the Tesla bipolar high-frequency current, which is obtained from the office-cabinet of a highfrequency transformer.

In order to accomplish this result, the current must be of a very high frequency and of a low amperage, so that the electrode may not become too hot and, in consequence, burn the mucosa. The usual high-frequency cabinets on the market are of an extremely high amperage and, consequently, produce a very hot, stinging, burning sensation when the required frequency is developed, so that the insulated glass vaginal electrode can be applied for hardly longer than seven minutes at a time, and this period is not long enough

for obtaining the proper results. I have had the unfortunate accident happen to me, of breaking two insulated vaginal glass electrodes while in the vagina, by using the current from the ordinary high-frequency cabinet, the heat or amperage of which could not be kept under control, nor properly regulated. Nor, for the same reason, can the portable high-frequency machine be used for this purpose.

The high-frequency battery illustrated herewith was, therefore, made so as to obviate such accidents and to obtain the proper results. It will give the very highest frequency, with just enough warmth to be comfortable, in one-half hour's treatment. The amperage of this machine is under perfect control, so that the high-frequency penetration and heat can be regulated to the requirements of the treatment. This, therefore, can be given daily for one-half hour, with resultant relief from pain and, yet, absence of any danger of excoriating the mucous membrane. It is my custom, in conditions in which inflammation, pain, and tenderness are present in the pelvic cavity, in connection with endometritis, to administer the high-frequency current daily until these symptoms are subdued, then to follow with the direct-current intrauterine treatment, or sometimes to give both alter-

In order to make more clear the above statements, the following observations will illustrate the method employed by me.

Illustrations From Practice

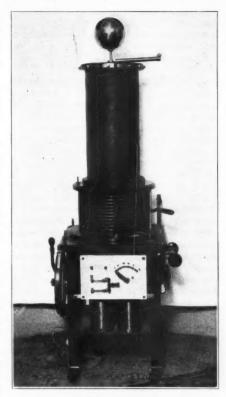
Observation 1. Mrs. H., age twentyeight, family and personal history good. Five years previous to our becoming acquainted, the lady had had severe pains in the *right* ovary, as a result of indiscretion during a menstrual period, which always had been a source of annoyance and pain since then. She was advised to undergo an operation for the removal of the tube and ovary, her condition having been diagnosed as an inflammation of these organs, associated with adhesions, the latter the result of this long-standing inflammatory condition. However, she had refused to submit to any operation.

When I first saw the lady, I found that she was suffering excruciating pain in the left ovary, and that it was considerably enlarged; she also experienced a sense of fulness in the vaginal vault. The uterus was immovable—on account of the adhesions—it was retroverted, and the cervix was turned upward and pressing against the anterior wall of the vagina and bladder, thereby causing a constant desire to urinate,.

The usual indicated remedies to relieve pain, inflammation, and fever were given. Also tampons of 10-percent ichthyol in glycerin were inserted daily in the vagina, and hot applications were made externally. After two weeks of such treatment, the patient was brought to my office daily for the high-frequency treatment.

This current was applied by inserting into the vagina a sterilized glass vaginal insulated electrode up to the tender ovary, and a wet pad was placed externally. These electrodes were connected with the machine, so that this current would penetrate through these organs, the body of the patient not being charged. The glass electrode was attached to the active post of the battery, on top of the resonator, while the moist metal-covered pad was attached to the indifferent post, which was grounded. With this arrangement the patient is not charged, the current being concentrated only where required. The electrodes were placed, on alternate days, on the right and the left side, respectively.

Treatment was given daily for one-half hour, the current being so regulated that only a moderate degree of warmth was felt. After each treatment, a tampon saturated with 10 percent solution of ichthyol in glycerin was inserted in the vagina. The relief of pain was apparent from the start, and after a few treatments she was able to come to the office unassisted. This was continued for three months, when it was found that the organs in the pelvic cavity were in a perfectly normal condition, the uterus was in the proper position, and my patient was grateful in consequence.



High-Frequency Battery

I have observed, in many cases covering a period of three years, that, where the uterus is in the position described in the above case, virtually upside down, it usually will go back to normal position when the adhesions and inflammatory exudates have been removed by means of this high-frequency treatment.

Gonorrheal Infection

Observation 2. Mrs. W., age twenty, of excellent family and personal history. She had a miscarriage at six weeks' pregnancy, with complete expulsion of the uterine contents. Hardly had she recovered from this experience, when a copious yellow discharge began to show, accompanied by almost constant pains in the organs of the pelvic cavity. A microscopical examination of this discharge was made, and it revealed a gonococcus infection. Her husband had previously applied for relief from this yellow discharge, which the microscope also had disclosed to be of gonorrheal nature. The woman was

confined to bed, suffering severe pains and hemorrhages. The usual indicated remedies and various other agencies, including the vaccines, were tried for about two weeks,

but with unsatisfactory results.

I now insisted that the lady come to the office for high-frequency treatments, but this proved most difficult, on account of the severe pain felt and consequent inability to walk. However, she was brought to the office daily for a week, and then she was able to come without being assisted. She received the treatments outlined above, and after the third treatment the pain subsided. These séances were continued daily for two weeks, then every other day for two months; and this was sufficient to effect complete relief of all aches and pains. The discharge had ceased entirely, and the woman was able to resume her usual duties, and feeling fine, as she said. A microscopical examination of the discharge made near the end of the treatment proved it to be entirely free from the gonococcus bacillus.

Subinvoluted Uterus and Infected Appendages

Observation 3. Mrs. B., age twenty-two, family and personal history good. She had not been well since the birth of her baby, two years before; since that time had always had an enlarged abdomen, pain in the right side over the location of the appendix and ovary, and there was a copious yellow discharge. The latter would cease entirely at times, then, after severe pains and chills, it would again flow profusely. She refused to undergo an operation for the relief of this condition.

Examination revealed a subinvoluted uterus, tender ovary and appendix, and a thickened fallopian tube that contained an abscess cavity. She applied for relief by means of the electrical methods, absolutely refusing to submit to an operation. I told her that electrical treatments might make necessary immediate operation, but she was perfectly willing to have this method tried

before submitting to the knife.

On account of the perfect drainage through the uterus from the fallopian tube, the direct current was used; this being advisable because of the subinvolution and also in order to promote the evacuation of the abscess cavity in the tube. A negative wet pad was placed on the abdomen, the positive copper amalgamated electrode was inserted into the uterus, and then a current of 5 milliamperes was passed for twenty minutes. This

was repeated on alternate days. The highfrequency current was employed on the intervening days.

After the second week of treatment, the pus discharge gradually became less; however, a severe hemorrhage now took place, which required the most strenuous treatment. The patient was in bed five weeks before the hemorrhagic condition finally subsided. However, the pains in the ovary and appendix still continued. As in the previous cases, she was brought to the office, daily, for high-frequency treatment, as heretofore outlined, and after three months she

was discharged, perfectly well.

It is well to mention that in observations No. 2 and No. 3 there was good drainage through the uterus from the fallopian tube, and it was in consequence of this that I felt encouraged to try to save these patients from going on the operating-table. Had the opening from the tube been closed, and, hence, the pus sealed up, it would have been impossible to cure them except by surgical interference; for, an operation would have become imperative after but a few electrical treatments. Such has been my experience, and also that of other observers who are using this modality.

As to the first case cited, that of Mrs. H., it is now three years since the lady was discharged as cured, and she has been and is in perfect health since then, not feeling an ache or pain, whereas before the treatment every move was painful and her menstrual periods were a torment.

In a résumé of the above experiences covering a period of about three years, the following conclusions are arrived at:

Conclusions

An operation for ovarian inflammation and for congestion of the organs of the pelvic cavity can be avoided if the high-frequency bipolar Tesla method, as here outlined, is employed.

This result can be accomplished only if the adhesions are not too extensive or too

dense.

Congestion of the ovaries, when complicated by the presence of pus in the fallopian tubes, but where good drainage is present, need not lead to an operation, if treatment with this high-frequency method is adopted.

In any event, this method of treatment should be tried and faithfully carried out before an operation is finally decided upon.

Cystitis and Its Treatment

By George H. Candler, M. D., Chicago, Illinois

Author of "Everyday Diseases of Children"

MONG the diseases which give the general practitioner undue trouble, cystitis unquestionably ranks high. In the first place, patients do not, as a rule, consult their doctor relative to disorders of the urinary apparatus until the discomfort becomes unbearable, and even then they either object strenuously to thorough examination or (as frequently happens) the doctor himself is unprepared to carry out the procedures necessary for a clean diagnosis. Consequently, erosions of the deep urethra, prostatitis, vesiculitis, simple catarrhal cystitis, other, more serious, vesical infections, and even severe forms of pyelonephrosis are treated "on general principles"; the doctor merely prescribing some urinary antiseptic (most commonly hexamethylenamine), and copious drinking of water; besides, sometimes, certain dietary restrictions. In the more advanced cases, vesical irrigation is carried out; but even here the execution very often is so imperfect that the last state of the patient is worse than was the first.

So, the subject of some easily controlled disorder of the bladder goes along, growing worse from week to week, until at last he seeks the advice of a specialist or, less fortunate, falls into the hands of some advertising quack. Whichever it be, such a patient parts with a large sum of perfectly good money that, in part at least, properly should and actually might have gone into the pocket of the family doctor, as deserved compensation for really effective aid rendered.

In these days of parcels post and accessible, thoroughly equipped laboratories, it is quite unnecessary for the busy physician to be a skilful uranalysist. He should, it is true, be prepared to make the more ordinary tests, and ought to do so; however, very few can afford to devote the time for a full routine chemical and microscopical examination of urine, while some even can not spare the money for the apparatus. Still, every practitioner must train himself to go over the patient with extreme care, and not only must know just what to look for, but must also be able to recognize any conditions that may present themselves unexpectedly.

For example, it will be quite useless to give urinary antiseptics to a patient having a vesical polypus, nor will massive doses of urotropin control even a simple infection of

the bladder if the urine remains distinctly alkaline. To attempt treatment of a supposed cystitis while failing to establish the existence of prostatic hypertrophy, means to invite defeat; and, moreover, one takes money that has not been earned.

Altogether too frequently one hears expressions running somewhat like this:

"O yes, Doctor So-and-So is mighty good when it comes to bringing the babies, but, somehow, he doesn't seem to be able to hit one's chronic trouble. I treated with him for 'most a year for my bladder, and was worse off then than when I started in. So, I thought I'd go to the city, and there I saw a chap at the hospital, and he stuck in a lit-up hollow tube with a looking-glass on it and looked right into my whole waterworks. Took him about an hour to find just where the leak was, but he struck it all right, and fixed me up in less'en a month. But I had to pay him \$200 for the job-half cash down before he'd even look at me. But, then, I s'pose it's worth that to me, anyhow."

Just such cases occur many, many times a day throughout the land, and by reason thereof a few "chaps in the cities" wax rich, while the income of the "home physician" grows "small by degrees and beautifully less." The main object of this article is, to correct this state of affairs as far as possible, by pointing out succinctly just how the doctor may help-and thus hold-his cystitispatients.

First and foremost, it must be remembered that without initial congestion the active cause, bacterial infection, could not exist. Such vesical congestion may be quite superficial or it may be deep-seated, and produced

by any one of a score of causes.

For instance, pressure or a blow over the bladder may set up inflammation; the prolonged use of alcohol or the ingestion of certain medicinal agents will produce congestion of the mucosa. A true toxic cystitis from the action of such drugs as mercury, silver nitrate, oil of turpentine, balsam of copaiba, phenol can usually readily be recognized. In obscure cases, however, it is always well to ascertain definitely whether any of these or similar agents have been used.

Not a few troublesome attacks of cystitis are set up by the voluntary retention of urine. Overmodest women (and even young men), through inability to retire unobserved, sometimes allow their bladders to become unduly distended, with the result that, when the viscus finally is emptied, the blood-vessels, suddenly relieved from pressure, become congested; and then the always present bacteria find a soil favorable for their propagation.

Retention due to obstruction, whether of the urethra or by an enlarged prostate gland, is a still more frequent cause. Here, a more or less severe infection usually occurs quickly.

It must be borne in mind, however, that the mere fact that there is pain in the bladder region and pus present in the urine does not necessarily point to the existence of cystitis. The pain of proctitis, prostatitis, even of mere congestion or erosion of the deep urethra, may be referred by the patient to the bladder, while the pus may be of urethral or of renal origin.

Partial retention of urine, with its necessary decomposition, is a very frequent cause of cystitis, as is the presence of calculi. Vesical tumors and tuberculous lesions may easily set up cystitis, and such will yield only to surgical procedure. Somewhat more amenable forms follow pressure or pulling upon the bladder-walls by intrapelvic or abdominal growths. Getting wet or exposure to extreme cold, especially of the pelvis or lower extremities, often causes congestion, as, too, will the passage of highly irritant urine such as occurs in oxaluria, uricacidemia, and so on. Now and again the initial congestion can be traced to sexual excesses.

First-Find the Cause

It is quite apparent that in every case it is desirable to recognize the predisposing cause; while in most instances one must correct or remove it or, where that is impossible, modify as much as possible the resultant condition. For example, it would be quite useless to irrigate the bladder and administer urinary antiseptics when the cystitis is due to a collection of pus behind or in front of the viscus or to the presence of adhesions or other anatomical faults.

Further, it is essential that the invading bacteria be identified and if possible (as it usually is) the direction of the infection ascertained. The principal offending microorganisms are: the colon-bacillus, the staphylococcus, streptococcus, gonococcus, pneumococcus, tubercle-bacillus, and the urobacillus liquefaciens septicus. In the great majority of chronic cystites, a mixed infection (colonbacillus, streptococcus, and staphylococcus)

exists. Rarely (and then usually in women or children) the bacillus coli alone can be discovered.

The Facts About Colicystitis

This latter form of the disease (colicystitis) has, until quite recently, received little or no attention, the majority of textbooks failing even to mention it. Nevertheless, the doctor whose work lies chiefly among children must have encountered more than one case and, while labeling it cystitis, wondered just why the disorder assumed such peculiar aspects and what caused the intermittent fever, which persisted despite ordinary treatment. English practitiones speak of cystopyelitis and consider that, while the bladder is primarily infected, the renal pelvis becomes involved later on in some cases, the kidney structures generally, when all the symptoms of pyelonephritis present. As a matter of fact, the "primary invasion of the bladder" is fairly common; but, so far as my own observation extends, an ascending infection is of rare

A pure colicystitis is due to the invasion of the vesical mucosa by the bacillus coli communis. It is liable to appear after an attack of enteritis, and Trumpp has suggested that the bacteria migrate through the short female urethra; however, as we know that males also become similarily affected, it is more probable that entrance is gained through breaks in the mucosa of the intestine.

Mild and Severe Types of This Form of Cystitis

The disorder presents itself in two distinct forms, one mild, the other severe. In the first, or mild, variety, the systemic dis-turbances are but slight, the vesical spasam is fleeting, and the train of symptoms disappears in two or three weeks under the free use of antiseptics. The urine, which when voided shows an acid reaction, is flocculent, contains albumin and bladder-epithelium, and upon standing turns dark, appearing almost like beef-juice. At this later stage, bacteria abound in the urine, while vesical tenesmus is severe at urinating; also, considerable tenderness of the bladder to pressure is exhibited. Under rational treatment, the urine begins to clear up in a few days, the temperature gradually drops, and recovery ensues.

In the severe type (which may follow the former) persist for months, all the symptoms enumerated appear aggravated and the heatlh of the patient gradually declines; it is even quite possible the kidney to become involved, when it constitutes the cystopyelitis of English

writers. The urine in such cases emits a very fetid odor, contains pus and a large amount of albumin, and on standing becomes almost opaque. Anorexia at this time is pronounced, any food taken being vomited almost immediately. Diarrhea is also likely to add to the discomfort of the patient. It is not improbable that the disorder may run a latent course, possibly being revealed only by chance, as through examination of some cachectic patient recovering from enteric disorders.

Pathology and Treatment of Cystitis

In the early stage, treatment is promptly effective and usually even the most pronounced symptoms can be controlled and dissipated in two or three weeks. A bacillus coli-bacterin should be administered as soon as the diagnosis is made or even if the infection is only suspected. Begin with a good flushing out of the colon. Then carefully cleanse the external genitalia, after which irrigate the bladder with 4 to 6 ounces of a warm solution of lysol (1-4 percent). Tricresol and antinosin (1:1000) also are quite as effective-the latter I prefer in the early stage. Repeat this procedure daily, seeing to it that the solution is retained in the bladder for a few minutes.

Arbutin and hexamethylenamine should be given in alternation, a dose every three hours, 1 grain of the first and 2 1-2 to 5 grains of the latter. The hexamethylenamine and acid sodium phosphate compound tablet most satisfactorily meets the requirements. A daily saline laxative is beneficial. About an hour after each meal 5 grains of the compound sulphocarbolates, with plenty of water, should be administered to secure intestinal cleanliness; moreover, the sulphocarbolate eliminated through the kidneys exerts a beneficial action. In the worst cases, 1 grain of methylene-blue may be exhibited four times daily, for two days, and then salol, 1 grain, alternated with the hexamethylenamine compound. Hydrastine hydrochloride, 1-32 grain, and arbutin, 1-3 grain, should be given three times a day, and continued for some time after normal conditions are restored.

In considering an ordinary attack of cystitis, it is necessary to ascertain whether the infection occurred either (1) by the descending route—from the kidney, (2) by the hematogenous route—through the circulation, (3) by the asscending route—through the urethra, or (4) by direct entrance from adjacent organs. When a suppurative process exists in the kidney itself, the secondary

cystitis is comparatively of little importance, but pus-producing germs may pass through a healthy kidney without affecting it in any way, and yet set up an infection of the bladder. Here, unless the remote source of the microorganisms can be ascertained, treatment, to be effective, must be directed almost entirely toward the bladder.

In gonorrheal cystitis in the male, we know that the Neisser bacillus has ascended from the urethra; in females, there is a chance of the infection occurring by direct entrance from adjacent pelvic organs. In not a few cases, I have found an intractible cystitis to disappear coincidently when an existing proctitis under treatment was cured.

These facts are presented, not because they are at all new, but in order to impress the basal truth that there can be no routine treatment for cystitis; rather, the affection calls for the most careful diagnostic work and a nicely balanced and diversified therapy.

It is out of the question here to consider fully the pathology of cystitis. Suffice to say that in the acute form the inflammatory process usually begins in the neighborhood of the trigone, but very shortly the entire mucous membrane becomes involved; and erosions and small ulcers develop, chiefly in the vicinity of the vessels about the vesical neck.

Those familiar with the appearance of the normal bladder are prone to be completely discouraged when they first observe through a cystoscope the changes brought about by a cystitis of long standing. The mucosa, instead of being pink, is of a gray or even yellowish color. The vessels stand out like cords and trabeculæ and diverticulæ (some containing calculi or mucopus) are abundant. The wall itself, as a rule, is greatly thickened, consequently, the capacity of the bladder materially reduced. In some paralytic and in all obstructive cases of cystitis, the viscus is dilated. As in acute cystitis, erosions and ulcers are usually present. Not infrequently more or less extensive sheets of a pseudomembranous formation are seen adherent to the bladder-wall.

In socalled interstitial cystitis, the inflammatory changes extend deeply and the bladder is markedly shrunken. In this form, abscesses not infrequently form and rupture into the viscus, causing a sudden marked pyuria or even setting up a severe pericystitis.

In gonorrheal cystitis, as a rule, the lower quadrant of the bladder is alone involved.

[To be continued.]

Quinsy, or Peritonsillar Abscess

By E. Harrison Griffin, M. D., New York City

HAT is the trouble? How long have you had it? These were two stereotyped questions I asked every patient with a sore throat that applied at the old Outdoor Throat Department of Bellevue Hospital. If he mumbled some words in answer to my question and in so doing showed an inability to open his mouth, or tried to save himself pain in doing so, I knew at once that I had to deal with a case of quinsy, or, peritonsillar abscess. For, this inability to open one's mouth is a certain sign of quinsy. In diphtheria, follicular tonsillitis, croupous tonsillitis, tuberculous conditions, and syphilitic ulcerations of the buccal cavity, this particular symptom is absent.

The temperature in quinsy ranges from 100° to even 104° F. The pain at the angle of the jaw, shooting up the side of the face into the ear and restricting the movement of

the jaw, is the external symptom.

In examining the throat, he is a wise practitioner who looks at quinsy simply as an abscess of this region, and one that should come to a point inside of a few days. This is true of every quinsy of a pure rheumatic type; and over eighty percent are of this kind. If pus fails to show at this limit of time, we are dealing with a quinsy of a gouty type. I have opened quinsy swellings so thoroughly that I could pass the probe through from one opening to another and yet fail to find pus. The parts were hard to the touch, and the edges of the cuts were distinct and indurated. This is the picture of a gouty quinsy.

In rheumatic quinsy the finger can generally map out some soft place in the course of twenty-four or forty-eight hours after the initial chill. The progress of the disease is quicker, and the denouement, the opening either by the knife or nature, much shorter.

It is very essential to make the differential diagnosis between a rheumatic and a gouty quinsy, as in one the excessive pain of this affection is short, while under improper treatment the gouty is prolonged for days or even weeks. A gouty quinsy very seldom suppurates; if it does, it is only after a prolonged period.

The treatment: The bowels should be kept well open during the attack. Also, a nightly dose of 10 grains of quinine should be given, in pill form, if the patient is able to swallow, or in solution, if he can not take a pill. Also 10 grains of salicylate of sodium may be given every three hours, in plenty of water. Scarifying the surface of the inflammation with a small bistoury, by causing the escape of blood, often gives relief before the pus has formed. The throat should be examined, at each visit, with the aid of a strong light. The fingers should be used at each examination, to detect the early formation of pus. Time should be taken in this examination, and pus should be liberated as early as possible, for the comfort of the patient.

The parts can be soothed by the application of a 10- to 20-percent solution of cocaine, to be rubbed over the surface of the membrane with a wad of cotton fastened to a probe. The operation is painless and the relief afforded is beyond description. The worst case of quinsy I think I ever treated was the

following:

A woman applied at the Bellevue Dispensary for treatment. She had seen a physician previous to this visit, who had diagnosed her condition as hypertrophy of the tonsils. He had removed part of the tonsil. When she applied for treatment, it was only with greatest difficulty that she could breathe. Her mouth was tightly clinched and I was only able just to introduce a knife between her set teeth, and had to grope in the dark for the locating of pus, but finally was able to strike it. The pus flowed out in abundance, and the patient left the clinic, able to open her mouth wide. She was able to eat a meal for the first time in a week. An operation on the tonsil under these conditions was positively not indicated and might have led to serious results. There had evidently been a mistaken diagnosis.

Quinsy is no discriminator as to age. I have seen it in a baby of two months and in an old man of eighty, both with initial attacks. I have seen one attack of quinsy follow another, year in and year out, until the throat-membrane had had a thorough treatment and the patient's system had undergone thorough medication. Then these yearly attacks have stopped and the patient has been free from his yearly quinsy.

It is always wise to start in with a 5-grain dose of calomel, followed six hours afterward by a large saline purgative. A 10-grain dose of quinine may be given, with benefit, with the calomel. If this does not abort the quinsy, we have to deal with the stage of

suppuration. This is hastened by directing the patient to steam his throat continuously with the aid of the kettles that are common on the market.

Some years ago, I was called to see a patient in consultation at the Hospital for Deformities and Joint Diseases. The patient was a well-developed woman who gave a history of quinsy. She had been ill for over a week. The quinsy had been opened thoroughly and properly; still, she was unable to take food or leave her bed. She had had a temperature of about 103 degrees. With difficulty I passed my finger into her mouth, trying to feel if there was any point where pus might be present. The whole part was one large, hard mass; there was absolutely no spot where pus might be hidden.

I prescribed a purgative, to be followed by a saline in the morning; also 20 drops of wine of colchicum to be taken every three hours, in water. Upon my visit the next day, I found the patient sitting up in bed. The fever had disappeared and she was able to open her mouth to the normal extent. The following day she called at my office to receive treatment. My first visit was on a Friday, my second on a Saturday, when she was out of bed and well, and Sunday the patient was at my office. The result in this type of quinsy I attributed to the diagnosis of gouty peritonsillitis.

These two cases are only two of hundreds in which I have used this drug—that is, colchicum—with most gratifying results.

In treating quinsy, one should not be satisfied with a single method. One should go into the history of the case, find out how many attacks the patient has had, and be sure to make a differential diagnosis between rheumatic and gouty peritonsillitis. One should find the site of the pus and open the abscess as soon as possible, and keep the part open until the wound granulates from the bottom. The cavity should be washed out, with a small syringe, with a 25-percent solution of argyrol (which is better than iodine); and this should be continued till the wound has granulated. If this is done, the patient will be less liable to a return of the quinsy.

After an attack, the patient should be placed under proper medication, to prevent the yearly return of the affection. His urine should be examined in every case. Albumin is generally present during an attack, but disappears after convalescence. Do not be satisfied with the statement that the patient has had his yearly quinsy for ten or twenty years and that his father before him had his quinsy. Look for the cause and correct it.

Block, of Brooklyn, finds a hereditary factor in separation, desertion, and divorce, and states that these run through families. I believe this is so; but the cause of quinsy can be found, and the hereditary proclivities eliminated if the disease is individually studied, and if the patient follows systematically a prescribed treatment for this very painful and, in some cases, dangerous ailment.

I AM more powerful than the combined armies of the world.

I have destroyed more men than all the wars of the world.

I am more deadly than bullets, and I have wrecked more homes than the mightiest of siege guns.

I steal, in the United States alone, over \$300,000,000 each year.

I spare no one, and I find my victims among the rich and poor alike; the young and the old, the strong and the weak, widows and orphans know me.

I loom up to such proportions

that I cast my shadow over every field of labor from the turning of the grindstone to the moving of every train.

I am relentless. I am everywhere—in the home, on the street, in the factory, at railroad crossings, and on the sea.

I bring sickness, degradation and death, and yet few seek to avoid me.

I destroy, crush or maim; I give nothing, but take all.

I am your worst enemy.

I AM CARELESSNESS.

-George W. Burr.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

EDITORIAL NOTE.—This is the tenth instalment of Doctor Gray's remarkable autobiography, in which he gives an intimate record of his adventurous and romantic medical career, beginning in our own South before the War and now continuing, as it has for years, in the most tropical and pestilential portion of Mexico.

[Continued from page 1121, December issue.]

Magic Podophyllin

HAD a peculiar case in a ranchman, with double pneumonia, few years since, whom I visited on a Sunday morning. The case seemed utterly hopeless; and I refer to it because it developed a revelation that might not have been known to this day, if ever.

When I was a boy, podophyllum decoction was the slave purge on the plantation of my people; and it got into European medicine as a vegetable calomel—which it really is in a high and an innocent degree. I had the esinoid prepared in a compound, as follows:

Podophyllin resgr.	1-2
Hyoscyamus niggr.	
Extract nux vomicagr.	1-16
M. Ft. one pill or tablet.	

Two of these pills were a full adult dose, under current textbook authority, and this I have never ventured to exceed. I left 20 of them with the ranchman, to take 2 every night. Also I gave him some aconitine granules, with special instructions, as another visit was impossible before the next Sunday; being satisfied that he would not live twenty-four hours. The next Saturday afternoon, I went to the office of vital statistics, to look for the record of his death; which, though, did not appear. Hence, I went to his ranch early Sunday morning, and was astounded to find him weeding his garden.

As soon as I was out of the house, at my first visit, he told his wife that I knew he was doomed to die; and that, if those little black pills, 2 every night, would help him in any degree, all swallowed at once would do much more good or quickly put him out of his misery. The wife protested. But he had the little fellows in his hand, thrust them into his mouth, and down they went. In less than an hour, he was vomiting violently, and then purging a few hours later as if he had a gallon of castor-oil in him; the two operations continuing till the next day, when he was completely empty. But his cough and fever were gone. He took the aconitine the next day and subsequently, having a sufficiency of excessive dosage.

The incident started me to experimenting. gradually raising the authorized dosage till I found safe effectiveness in adult dosage for strong men from 8 pills or tablets; strong women, 6; less proportionately for feebler adults and others under 16 years. Now thousands of persons annually use the substance under that scale of dosage, in this district, and I have published it, in medical journals and otherwise, far and wide. I have known of two persons having taken 18 tablets by mistake, this quantity having been supplied, each of them to take 8 one night, and 2 each for the five subsequent nights. The 8 were taken, and soon after some other party gave the 10. Both cases were chronic rebellious malaria; and the effect practically was the same as with the man who took 20 of the pills; there was no more malaria.

Clean Out and Keep Clean

I give the substance thus for an active purge; and, when the case is not too urgent, one tablet every half hour is my favorite method, till the dose is complete. At night, is the proper time to take such purge, or even calomel, so the patient will not be eating afterward, which is detrimental. I use the compound pills, 1 or 2 tablets at night, as a hepatic adjuvant; they also tend to assist the stomach and the small intestines in labored digestion. I give even 1-20 of a grain at night for months in the treatment of anemia.

I have now dispensed, for many years

Calomel		۰						۰						.gr.	1-6
Podophylli	n.											٠		.gr.	1-6
Bilein				۰		0				٠		٠		.gr.	1-8
Strychnine	a	rs	e	n	a	te	3.			٠				.gr.	1-250

in tablet form, for certain complications, in which I get good service.

I have found that nearly every physical distress I am called to combat originates from derangements of the liver and the stomach, although it be of virulent germ characteristics, which cannot develop in a normal system. I must have had disease-germs in my system a thousand times, sufficiently numerous to have infected many people with systems vitiated in a degree to be favorable

culture-fields; yet, I was never sick, because never below normality, to enable the invaders to propagate. I have seen other persons thus exempt, even natives down here, who had no subnormal defect to nourish infection. Natural man is immune from disease-invasion. Man becomes unnatural by vitiating the liver and stomach till he sinks to subnormal impotence, unable to resist invasion; and that deplorable state supervenes from imprudent eating and drinking, and permitting indigestion to superinduce costiveness, when hereditary taint is not the defective bequest. There are so many causes here that I long since abandoned the pursuit of antecedents, and strive to cope with what exists.

I begin my assault on the invaders in their strongholds of the liver and stomach, the alimentary canal being dominated by the stomach, and very naturally participates in whatever medication that may be introduced. And I have found that nothing short of heroic purges, such as I have indicated, or calomel, followed by castor-oil (unsafe in this climate), and glycerin enemas or suppositories (the latter, however, being too expensive for plantation work), are the primal stepping-stones to successful medication. The saline purgatives are serviceable the mornings subsequent to night-purges, in certain cases, not needed in many. Such salts and castoroil, either in single dosage, though, fail to cope successfully with stubborn biliousness of malarial fever; and the loudly bruited pills from the United States and elsewhere, claimed to be specifics in the work I have to do. were practically worthless in my hands; in fact, I have found no patent medicine worth the empty flasks that contained it, in any applications I have met, where claimed to be all-powerful.

The obstructions of the liver and stomach once cleared away, other medication exercises a magical influence, which would have been practically nil with inadequate elimination and washing-out of the toxins. The debris of fetid excrement sticking to the surface of the walls of the colon and rectum often superinduce a return of abated fever, which necessitates frequent washing out. I usually employ normal salt solutions among the plantation people; probably as good as the high-toned preparations that I use among the rich. But you all have more free negroes on plantations and in the small towns of the southern states than there are peons in all of Mexico; and your colored contingents are vicious, filthy, and shiftless in a degree, as low as the bottom strata of humanity here. Hence you really need quickly acting heroics in the treatment of them.

Aconitine Experience

I had a typical aconitine experience here at home last year. I gave the mother 24 teaspoonfuls of a solution, telling her to give her little girl one every fifteen minutes, and that by the time she had taken four or five I should return. I was in the house just before time to give the fifth dose and found the child vomiting as if she were doubly seasick. She calmed directly, when the mother asked if she must continue the dosage; that, if so, it was nearly used up.

That surprised me, as there should have been 20 doses. I asked her what she had done with the medicine. She said she had given the child four spoonfuls four times-16 doses in three-quarters of an hour. I stopped the dosage and gave no more medicine that day, as there were no symptoms of aconite-poisoning. The fever was gone when the emesis ceased, and did not return. Prompt and active vomiting certainly saved her life, as the dose would have been lethal had it remained; and the doses had been ingested at such short intervals that it was tantamount to having taken all at one time. But I have shied clear of experimenting on that line.

Obstetrical Notes

I have an important practice with young mothers whose lactation is defective; and have not failed in a single case to secure them a liberal supply with pilocarpine—maybe not known to some young practitioners.

I have never had any regular obstetric practice, though amply instructed to have been at least practical, that work here being the right of midwives; and a very light task, as a rule, the dance frequently being over when the mystic woman arrives, although she was called at the first symptom of labor-pains. And I have seen the mother of a babe born at midnight in the kitchen, at sunrise the next morning getting breakfast ready. But they get stuck, sometimes, and have to yell to me. I have the very best of all the ergot derivatives that have appeared, which usually gets them out of the woods, where there is a suspension indicating such application. But when there is a serious unnatural complication, requiring to be manipulated by painful and even perilous force, the poor midwives are all at sea, in deep muddy water. I give the poor sufferer an anesthetic, and show and help the distressed midwives out of their difficulties. It is only in such cases, when the ergotin fails to act, that I am ever present.

While entangled in the intricacies of clinical female practice it may be as well to state that apiol gets me out of most menstrual troubles that come my way. But all such cases, as well as the difficulties with labor-pains and false positions of the child, come from the better classes, not the peon, or Indian, element. I now recall but two such cases calling for help from me in twenty years; and the peon births are about seven to one of the better classes.

I never treat any female diseases apart from gonorrhea and its complications; and most of that is in married women of the better classes, infected by their husbands. It rarely comes to me from peons or Indians.

Hereditary syphilis is immunized in the embryo and fetus by injecting salvarsan, at intervals of eight days between applications, into the prospective mother, 5 to 6 times, fractioned 0.20 to 0.30, up to 0.40 Gram. Then, after a rest of two months, another like series, 0.15 and 0.10 Gram. Renal functions rendering this feasible, the urine should be under rigorous surveillance in all stages of the treatment. And when there is marked intolerance, benzoate or biniodide of mercury should be associated with salversan in aqueous solution. This is often intensely important in curative adult treatment.

Abortions have not been in excess of those of healthy women undergoing no treatment, and far less than those of syphilitic women under no treatment. There were 75 percent still-births and prompt deaths after birth from syphilitic mothers, twenty months since, according to French obstetric statistics by Sauvage; the same class of mothers now giving 92 percent live and fairly normal births, after the treatment, which should have inception early after pregnancy is declared.

Salvarsan is a high-grade perilous substance, and the fractional dosage should not minimize the caution, the delicate condition of the pregnant woman requiring all the care that full adult dosage demands in regular practice.

(To be continued.)

GRIN*

By ROBERT W. SERVICE

If you're up against a bruiser and you're getting knocked about— Grin.

If you're feeling pretty groggy, and you're licked beyond a doubt-

Don't let him see you're funking, let him know with every clout, Though your face is battered to a pulp, your blooming heart is stout; Just stand upon your pins until the beggar knocks you out-And grin.

This life's a bally battle, and the same advice holds true Of grin.

If you're up against it badly, then it's only one on you, So grin.

If the future's black as thunder, don't let people see you're blue, Just cultivate a cast-iron smile of joy the whole day through; If they call you "Little Sunshine," wish that they'd no troubles too— You may-grin.

Rise up in the morning with the will that, smooth or rough, You'll grin.

Sink to sleep at midnight, and although you're feeling tough, Yet grin.

There's nothing gained by whining, and you're not that kind of stuff; You're a fighter from away back, and you WON'T take a rebuff; Your trouble is that you don't know when you have had enough-Don't give in.

If Fate should down you, just get up and take another cuff; You may bank on it that there is no philosophy like bluff. And grin.

*From "The Spell of the Yukon"

What Others are Doing

TOBACCO AND THE HEART

In the article which follows, we have given an abstract of some clinical experiments made by Dr. J. Aikman, to determine the effect of cigarette smoking upon pulse repidity and blood pressure. In The New York Medical Journal for September 11, 1915 (p. 541), we find another paper upon this same subject, contributed by Robert N. Willson, who cites the histories of two interesting cases of tobacco-poisoning. The first of these was that of a young man a little over 30 years of age who had anemia and suffered from a number of attacks of palpitation, associated with cyanosis, when the pulse rate ran up to 120; there also was a systolic murmer at the base of the heart. Under simple hygienic treatment, with withdrawal of his tobacco, these symptoms disappeared in every instance.

The second patient was a member of Doctor Willson's own family—a man of 76 years. In his case, there was excessively low blood pressure and, what was most significant, an attack of hemianopsia, with an array of paralytic symptoms present more or less for a period of seven years, but, as a rule, clearing up rapidly when the patient stopped the use of tobacco.

Doctor Willson utilizes these cases as a text to demonstrate the disastrous effects which may follow the use of this herb. While personally he knows of no one who actually has been killed by smoking, it is his confident belief that the responsibility for the arteriosclerosis not attributable either to syphilis or old age must be divided between the use of tobacco and the various forms of foodtoxemia.

He quotes various authorities to prove that amoking tends to increase the frequency of the heart beat and to change arterial pressure. Thus, to illustrate, he tells how, in 62 separate experiments in this direction, made at frequent intervals, in only 2 of the subjects did the inhalation of tobacco-smoke fail to produce marked blood-pressure changes. Doctor Willson is convinced that most of the cases of angina pectoris are due to the habitual use

of tobacco, and that many, if not all, of the instances of pseudoangina are examples of toxic involvement of the ganglia of the heart or of the nerves of the cardiac plexus.

He also says that he is accumulating considerable evidence which seems to prove that the children of a tobacco-user and his tobacco-absorbing wife also pay a cardiovascular toll, in a tendency to acquiring fibrous and leathery blood-vessels.

THE EFFECT OF TOBACCO-SMOKE UPON THE HEART

If tobacco is an evil, then it is a gigantic evil. Look at these figures: According to John Aikman (N. Y. Med. Jour., Oct. 30, 1915, p. 891), the world's tobacco production of 1912 was 2,835,000,000 pounds. More than 578,000,000 pounds of the weed were consumed in our own country, and the value of the product raised in the United States was in excess of \$416,000,000. This showing places the tobacco-industry ahead of the automobile industry, the baking industry, and numerous other of our foremost enterprises.

Is the smoking of tobacco seriously injurious? Doctor Aikman, after having conducted a rather extensive investigation of the literature and making some personal experiments, positively declares that it is. Thus, for instance, he tried to learn the effect of cigarette-smoke upon 27 young men, ranging in age from 16 to 31 years. In these experiments, the subject sat quietly in a chair in a quiet room, with the examiner, and smoked the cigarette as he was accustomed to do. Tests of the pulse and the blood pressure were made both before and after smoking, great care being taken to exclude all psychical or other influences tending to interfere with the accuracy of results.

The effect upon the pulse, produced by smoking a single cigarette, was marked. Out of the 27 men tested, 16 showed an increase of over 8 beats per minute. Except in 4 of them, the rate was increased, and 2 of these 4 had an abnormally rapid pulse at the beginning. In some cases, the increase in rapidity was spectacular, the greatest

being 24 beats in two and one-half minutes; the average increase being 14 per minute.

The effects upon the blood pressure were not so marked and uniform. Thus, in 25 of the subjects, the systolic pressure fell in 12 of them, in 5 there was an increase, while 18 showed no change. The average gain was 5.8 mm., and the average fall was 6.16 mm.

Doctor Aikman also observed that those who inhaled tobacco-smoke displayed a much more decided response to the tobacco than those who did not. It was also found that cigarette smoking tends to cause irregular

action of the pulse.

Doctor Aikman comes to the conclusion, as the result of his own experiments, as well as from the widely conflicting opinions of various other experimenters, that we are far from possessing definite information concerning the true effects of tobacco smoking upon man. However, he personally feels that this narcotic must have played some part in the great increase of circulatory disease witnessed within the last few years, during which period the tobacco consumption has increased so enormously. "Is it not possible," he adds, "that the disturbances of circulation which we have seen produced by a very small amount of tobacco, frequently repeated daily for years, may play a much greater part in the general increase of circulatory diseases than we realize?"

NOVEL TREATMENT FOR ACUTE RES-PIRATORY DISEASES

In dealing with acute infectious disturbances of the upper air-passages, says Irving W. Voorhees (Boston Med. & Surg. Jour., Nov. 4, 1914, p. 702), the two remedies most commonly used by specialists are silver, in some form, and iodoform. The former is irritating when strong enough to be effective; the latter, whether dissolved in ether or in oil, is both irritating and esthetically unpleasant.

For some years past, Doctor Voorhees has been securing rather remarkable results in this class of diseases from direct application of such aromatic substances as thymol, eucalyptol, menthol, and the oils of cloves and cinnamon. His favorite now seems to be a solution of menthol in oil, in the strength of from 5 to 25 percent. The applications are made every eight to twelve hours—usually twice a day. If the patient complains of the burning caused, then a few

drops of a 10-percent cocaine solution should be instilled a few minutes before applying the menthol.

In bronchitis, Doctor Voorhees says, it is astonishing how effective the treatment is. It relieves cough, increases expectoration, is antiseptic, while the oil used as a vehicle makes it sedative. Treated in this way, he declares that a case of simple bronchitis (not due to pneumococcus or streptococcus) should not last more than seventy-two hours. Applications are made directly to the trachea with a laryngeal syringe, while the patient exhales and inhales through the open mouth. In acute laryngitis, the drops should fall directly on the rima glottidis during phonation.

In acute rhinitis, the patient is asked to lie down with the head far extended over the edge of a couch, and the drops (usually 5 percent in strength) are instilled into the nose with a dropper, care being taken to point the dropper upward in the direction of the eyes. In pharyngitis, a postnasal applicator is used to apply the menthol-oil

solution.

MENTHOL-OIL SOLUTION IN EARACHE

An effective remedy for earache, according to Voorhees, in the article cited just above, is the menthol-oil solution recommended for treating infection of the upper air-passages. In furunculosis of the ear-canal, he packs with gauze soaked in a 10-percent oily solution of menthol.

PHENOLPHTHALEIN AS A LAXATIVE

"I have prescribed rather more that 1000 doses of phenolphthalein," writes J. C. Mc-Walter in The Lancet for November 20, 1915 (p. 1141), "and find it probably the most useful laxative in the Pharmacopeia." This certainly is praise unqualified. Doctor Mc-Walter declares that a sufficient dose of phenolphthalein produces loose movements within four to six hours, and this result is obtained without griping or pain. Furthermore, it does not seem to lose its effect by continued use, at least not until it has been persisted in for a considerable time. Its action, he says, is very much like that of cascara sagrada, but it has the advantage of being more active and less griping.

McWalter says that he has prescribed phenolphthalein in many cases of pregnancy, and it seems to him almost an ideal laxative in that condition. This remedy is particularly useful in intestinal toxemia, offering almost ideal advantages as a medicament in these cases, since it is mildly antiseptic without being toxic or cumulative, while free from irritating action upon the mucous membrane of the intestine.

In cases of mucomembranous colitis, he asserts, phenolphthalein, given in doses of 1-2 grain thrice daily, will be found eminently satisfactory in preventing enterospasm, easing pain, checking excessive secretion of mucus, improving the neurasthenia, and generally improving the patient's condition. He ordinarily administers it in doses of 1-2 to 3-4 grain for children and of 2 to 6 grains for an adult.

SYPHILIS IN THE ARMY AND IN CIVIL LIFE

There have been all kinds of estimates as to the percentage of the population infected with syphilis. Captain Edward B. Vedder, of the United States Army (whose pioneer work in emetine-therapy in amebic dysentery is known to every reader of this journal), has thrown more light upon the prevalence of syphilis than any man who has heretofore studied it in this country. He has made or caused to be made hundreds of Wassermann reactions upon enlisted men in the army, West Point students, and others.

First Wassermann reactions were made upon 1019 newly enlisted white recruits at Fort Slocum, near New York City, and at Columbus Barracks, Columbus, Ohio. Of these men, it was shown, approximately 16.77 percent were presumably syphilitic. Inasmuch as everyone of these young men presented no apparent signs of syphilitic infection whatever and all were accepted by the medical officer as free from venereal disease, this percentage is certainly remarkably high. Captain Vedder shows, however, that the percentage of syphilis in these young soldiers is undoubtedly lower than in the corresponding civil population from which they were recruited. He estimates that about 20 percent of young adults of this class are infected with syphilis.

The results of the Wassermann tests made at West Point Military Academy are interesting and surprising. The cadets are picked young men, coming presumably from a superior class, corresponding to the class from which the students in our colleges are recruited; and, yet, it was shown that probably 5.46 percent of these West-Pointers were syphilitic. Not one of them gave objective signs of the disease.

The negro recruits were shown to be much more generally infected with syphilis than white recruits, the disease being two or three times more prevalent among the colored enlisted men. The Wassermann tests of 1472 colored soldiers belonging to the 9th and 10th cavalry regiments showed that probably 36 per cent were suffering from the disease. The highest degree of syphilitic infection, however, was found in the Puerto Rico regiment, recruited entirely on the island of Puerto Rico. Of these men, 51.79 percent were shown to be probably syphilitic. Captain Vedder expresses the opinion that this very large percentage of venereal disease on the island of Puerto Rico is very largely responsible for the anemia and debilitated conditions so common among the poorer inhabitants of that island. Syphilis, tuberculosis, malaria, and malnutrition are even more potent causes for ill health among these people than is hookworm-disease.

These statistics certainly indicate the seriousness of the problem of venereal disease in our country. While the white race is much freer from these infections than are members of the colored race, and Americans, in this respect, are far superior to the Latin people, of whom the Puerto Ricans may be considered typical, there can be no doubt that a dangerously large percentage of our people are being continuously undermined in health by the ravages of this secret, insidious, and too generally overlooked plague of overcivilization.

COLIC IN INFANTS

In a preceding number of this journal, attention has been called to the value of an emulsion of mineral oil in the treatment of colicky babies. This emulsion has been strongly advocated by Dr. Eric Pritchard, of London. In a recent communication, referred to in *The Universal Medical Record* for September, 1915 (p. 216), Doctor Pritchard says that in treating these colicky infants he sometimes almost fills their intestines with the petroleum-emulsion, either alone or in combination with bismuth carbonate.

The chief objection to the administration of the bismuth in large doses is, that its gritty properties make it distasteful to the infant. This disadvantage, however, can be overcome by using the preparation known as glycerinum bismuthi carbonatis—a most elegant preparation, of milky softness, the details for the making of which are given in the Codex of the British Pharmacopeia. One, or even two,

drams of this preparation, combined with an equal quantity of petroleum-emulsion, serves as a most efficient carminative for infants troubled with colic. Such a mixture may be given independently or else shaken up with the baby's milk, from the nursing-bottle.

THE ENTAMEBA OF PYORRHEA

Dr. C. C. Bass, of New Orleans, certainly evidences no loss of faith in the specific action of the entamœba buccalis—or, as he calls it, the entamœba gingivalis—in the causation of dental pyorrhea. In his address delivered before the Indiana State Medical Association (printed in its journal for October, 1915, p. 455), he declares that this parasite is present in all pyorrheal lesions, but invariably is absent from the mouth when there is no pyorrheal lesion, and that it cannot be demonstrated in the absence of suppurating tissue.

Compared as to size with other socalled microorganisms, Doctor Bass says, the entameba, is "an enormous animal, several hundred times larger than the streptococcus, staphylococcus or pneumococcus. This amebic organism has the power of moving around and under the microscope we can see it passing from place to place. In passing between cellular organisms, it often drags behind itself a mass of bacteria, sometimes several different kinds being conveyed in this way, in and out of the living tooth-structure. In this way, the bacteria are carried deeply into inflamed tissue and the formation of pus is the natural result.

As Doctor Bass says, there is more or less symbiosis between the bacteria and the entameba. It is probable that the bacteria could not get along without the entameba, and vice versa.

This harmful organism is exceedingly common. The number of persons infected with this parasite probably constitutes as high as 95 to 99 percent of the entire population. Infection usually takes place in childhood, probably 50 percent of all persons being attacked between the twelfth and fifteenth years. Infection may be carried in many ways, as, for instance, by the ordinary drinking-cup. Thus, in the home, the parents have the disease and all drink from the same vessel; again, their little boy receives a toyhorn and the mother shows him how to blow it, and then he puts the horn into his mouth, thereby transferring some of the amebas to his own mouth. Kissing is probably a common means.

As an illustration of the possible effect of an uncured pyorrhea upon an individual's health, Doctor Bass has calculated the amount of pus which may be secreted by an ordinary individual who has 32 teeth. He declares that this calculation shows that during twenty or more years of adult life, no less than 8 gallons of pus is secreted by an individual thus affected.

Doctor Bass is still firm in his faith that in emetine we have a specific remedy for the parasite. "Our knowledge of the disease and of the parasite is so imperfect," he declares, "that our methods of treatment are far from perfect and far from satisfactory. It frequently occurs that a few doses of emetine are followed by entire disappearance of the entameba and of the lesions. They remain absent for variable lengths of time, but, since the source of reinfection is so very great, as everybody else has the same disease and we are constantly exposed to reinfection, the organism appears again after a time. must know a great deal more about the use of emetine, a great deal more about the manner in which the parasite is transferred from one individual to another, before we can lay down dogmatic rules for treatment and before we shall be able to be perfectly successful in treatment."

PAROXYSMAL CORYZA, AND ITS CURE WITH EMETINE. ENTAMEBA NASALIS

In a paper published in The Medical Record, for October 9, 1915 (p. 604), Alexander C. Howe describes a group of nasal symptoms which, he says, for a long time has baffled all attempts at relief. The clinical picture exhibits the following group of symptoms: sudden onset, sneezing, watery nasal discharge, stuffiness of the nose, postnasal rawness, and a sense of chilliness. The attack may last a few minutes, or as long as an hour, and it disappears as rapidly as it comes on. There are no sequels. The subject of these attacks usually is depressed physically and mentally and rarely feels in proper condition for efficient work. Between attacks, the nasal passages rarely feel comfortable.

The beginning of the attacks, generally is ascribed to exposure to drafts, and the patient thinks he is subject to "colds."

Doctor Howe calls attacks of this kind "paroxysmal, or abortive, coryza." In his study of this condition, he has uncovered the interesting fact that more or less extensive pyorrhea alveolaris is present in the mouth

of practically every patient affected. Not only did he find the distinctive entameba of Riggs's disease in the oral pus-pockets, but he also succeeded in finding, in the majority of the patients, another, but different, ameba in the nose; this resembling the entameba histolytica of dysentery more than the entameba buccalis. He calls this the entameba nasalis.

Doctor Howe describes a large number of cases of paroxysmal corvza, 15 of them in detail. These fall into several classes, according to the associated complications. It is interesting to learn, however, that in the majority of instances he was able to effect a cure of the disease with the aid of emetine. For instance, in his first class of uncomplicated cases, consisting of 23 patients, all but 3 were entirely relieved of the general nasal symptoms by emetine treatment. In the 3 cases unrelieved, the patients suffered little if any, from disease of the mouth. Even in cases complicated with sinus disease, or with some serious general condition, relief usually followed the emetine treatment.

ALUMINUM-ACETATE APPLICATIONS FOR SMALLPOX

Some remarkable results in the local treatment of smallpox are recorded by Ferdinand Traeger, of the municipal hospital of Kaaden, Austria, which certainly deserve attention at the hand of those who still may happen to encounter cases of developed variola. The remedy referred to is a solution of aluminum acetate in alcohol (spiritus vini rectificatus, of the German Pharmacopeia, of 60 percent by weight), a preparation of late years grown in favor among physicians of Germany and Austria-Hungary—especially during the present war-and already alluded to in this department, as an antiseptic and antiphlogistic dressing for wounds, particularly purulent ones. It was his familiarity with its excellent action on infected wounds that prompted Doctor Traeger—as a sort of happy inspiration-to give this aluminum-acetate lotion a trial when a smallpox-victim (the fourth or fifth in an incipient epidemic started by a soldier) in the suppurative stage and very ill came under his care.

For years, Doctor Traeger writes (Ther. d. Gegenw., May, 1915, p. 200), he had been employing this popular agent and had attained many a fine result, and it suddenly occurred to him that, if embrocations with it are capable of healing abscesses and causing to disappear inflamed lymph-glands of hazel-

nut size under the thick cutis, it ought to act still more effectually upon the variola-efflorescence covered merely by a very thin epidermis. So, he ordered the solution of 5-percent strength. Pads, or compresses, of soft cambric ("Billroth battiste") were made wet with the liquid and placed over the erupted areas and allowed to remain three hours; beginning with the face, first of all, then in rotation, these wet compresses were applied successively to the chest, the abdomen, and the dorsum.

[More than likely the author means solution of aluminum acetate of the German Pharmacopeia—modern medical writers are so very careless in their use of language. This solution also is known as Burow's liquor (pronounced Booroff), after its sponsor, Karl August von Burow, German surgeon, who died in 1874. Formulas will be found in the National Formulary, U. S. Dispensatory, and Standard Formulary.—Ep.]

Already the following day a marked improvement in the patient's condition was discernable and her temperature had abated considerably. On the second day, the pustules had lost their glistening appearance; on the third, they had visibly shriveled; and on the fourth many of the eruptions had disappeared; in the further course of a few days, nothing remained of any of the fully developed pustules but livid spots on the skin, not even crusts having formed.

Meanwhile the malady had broken out in the local orphan-asylum, 13 boys and 1 girl coming down within two days; all but 3 of the attacks being severe in nature, a few even of the confluent type. Here, too, the outcome of the aluminum-acetate embrocations is pronounced by the author as having been "brilliant." The fever, in some attaining to 39.5° C., disappeared in the course of two days, the eruptions devoluted in precisely the same manner as in the woman first so treated, leaving no scars except slight ones in a few. The clouded mind (in some of the children) became clearer by the third day, while the next day these greeted the Doctor with a cheerful welcome. This report was written when even the 9 very sick children had almost recovered, the pustules having healed mostly without leaving scars or a trace of crust, excepting for small ones here and there in a few of the cases; only one child showed a single depression, the size of a millet-seed, in the face.

Doctor Traeger emphasizes particularly the fact that these applications exerted a direct soothing effect upon the pain and itching of the sores; only perhaps at the start some slight burning sensation being experienced from the lotion. Indeed, the little sufferers, even the youngest, would call for these dressings.

Thus, then, Doctor Traeger concludes his note, there is presented to the medical profession, in the alcoholic solution of aluminum acetate, a remedy—where now we have none such for this disgusting malady—that combines in itself a number of most valuable properties; it is extremely simple and economical to use; it quickly allays that pain and terrible burning; it rapidly reduces the temperature to normal, simultaneously improving general wellbeing; it influences the retrogression of the pustules as does no other known agent; above all, it obviates pitting in most instances, but, at all events, it leaves fewer and lighter scars in the face.

CAMPHORATED WINE AS AN ANTISEP-TIC VULNERARY

In connection with the foregoing item, the following abstract from a statement contained in a private letter of Richard Koch (in charge of a German reserve hospital) written to one of the editors of the *Therapeutische Monatshefte* (March, 1915, p. 175) will be of interest.

He does not give his reason, but Doctor Koch simply tells his friend that, in place of the widely employed aluminum-acetate vulnerary [see ante], he has been using—on a large scale, naturally—as a dressing for infected wounds the camphorated wine of the German Pharmacopeia. The "Standard Formulary" reproduces the formula for this vinum camphoratum in avoirdupois proportions, as follows:

Camphor				grs. 290
Alcohol				
Mucilage of acacia, U	. S.	P		. flozs. 2
Sherry wine				flozs 29

Dissolve the comminuted camphor in the alcohol. Slowly mix the mucilage with the wine. Then gradually and with constant agitation (to prevent precipitation of the acacia by the alcohol) add the camphorspirit to the wine mixture. (Stated relatively, the proportions of the ingredients, by weight, are: Camphor, 1 part; alcohol, 1 part; mucilage of acacia, Ph. G., 3 parts; white wine, Ph. G., 45 parts.)

The writer of the letter then comments, saying: "It is not as generally known as it ought to be that camphor in this combination constitutes a wound remedy of most remarkable virtue. Under its influence, the edges of a wound do not present that pale, tumid appearance observed with other moist dressings; rather, when the skin still is vascularized, it has a normal pinkish color, the granulations are large and fresh-looking, the wound cleans up at a remarkably rapid pace, and, moreover, the pain is wonderfully soothed—a fact highly appreciated by the suffering victims. In view of these facts, ought we, perhaps, not to devote closer attention to the local action of camphor?"

This last remark undoubtedly deserves consideration; still, there presents itself the other question: What role does the alcohol play, both in this as in the preceding preparation, as also in various other spirituous vulneraries?

ANTITOXIN DOSAGE IN LARYNGEAL DIPHTHERIA

There is no place for conservatism in dosage when treating a well-marked case of laryngeal diphtheria, Albert J. Bell writes in *The Lancet-Clinic* for July 31. 1915 (p. 104). As a text for his remarks, he reports the case of a child suffering from this disease, and to whom he gave 21,000 units at a dose. This child already had received 5000 units previously, given by the attending physician. In spite of this large dosage, no marked improvement occurred for about eighteen hours.

As Doctor Bell shows, there always is the liability of mistaking laryngeal diphtheria for laryngeal croup, and, as we all know, this form of diphtheria is peculiarly prone to prove fatal. Under such circimstances, physicians should never be sparing in the dosage of antitoxin. Also, in order to insure immediate action, it is advisable to make the first injection—of 15,000 or 20,000 units—intravenously, introducing an additional dose of 15,000 under the skin or intramuscularly. Only when the antitoxin is introduced directly into the vein can we be sure of securing the maximum effect in the minimum time.

THE DOSAGE OF DIPHTHERIA-ANTI-TOXIN

We advise every reader of CLINICAL MEDI-CANE to make a mental note of the table below, which gives the dosage of diphtheriaantitoxin for different ages and varying degrees of severity. This table was prepared by Dr. William H. Park, director of the Bureau of Laboratories, of the New York health department, and it is reprinted from The Weekly Bulletin of the department. It has been endorsed by the medical board of the Willard Parker Hospital and by the diagnosticians of the Bureau of Preventable Diceases.

Discuses.			
Mild Cases	Moderate	Severe	Malignant
Units	Units		Units
Infants, 10 to 30 pounds in weight, 2000 (under 2 years of age)	3000 to 5000	5000 to 10,000	10,000
Children, 30 to 90 pounds in weight, (under 15 years { 3000 to 4000	4000	10,000	15,000
	to	to	to
	10,000	15,000	20,000
Adults 90 pounds 3000	5000	10,000	20,000
and over in weight to	to	to	to
5000	10,000	20,000	40,000

Cases of laryngeal diphtheria, moderate cases seen late at the time of the first injection, and cases of diphtheria occurring as a complication of the exanthemata should be classified and treated as "severe" cases.

In all cases a single dose of the proper amount, as indicated in the schedule, is recommended. For immunizing purposes a dose of 1000 units should be used.

It is recommended that the methods of administration be as follows:

as follows:

Mild cases—subcutaneous or intramuscular.
Moderate cases—intramuscular or subcutaneous.
Severe cases—intramuscular, subcutaneous or intravenous. Malignant cases—intravenous.

EMETINE IN THE CONGO. HEMORRHOIDS

According to a report made by Van Branden and Dubois, and published in the Presse Medicale (July 22, 1915), the introduction of the emetine treatment of amebic dysentery in the Congo has caused a decided reduction of its mortality. The authors prefer to administer the drug intravenously.

An interesting report is also given of a case of hemorrhoids in which the administration of 1 1-2 grains of emetine hydrochloride relieved the pain and caused shrinking of the tumor so that it was readily returned into the rectum.

NARCOTIC ANESTHESIA

An interesting paper upon narcotic anesthesia is contributed by G. Mason Astley to the March number of The Pennsylvania Medical Journal (p. 441). Doctor Astley has had considerable experience with hyoscineand-morphine anesthesia and has come to the conclusion that this method of securing surgical analgesia is of special advantage in cases in which inhalation-anesthesia is contraindicated because of fear or nervous excitement; also, in operations about the upper airpassages, and in cases of lesions above the diaphragm, such as cancer of the breast or neck or of cranial or facial lesions where there are no contraindications to the use of narcotic drugs.

The author does not believe that the hyoscine-morphine method of producing anesthesia is an ideal one to choose for young patients, the delirifacient action of the hyoscine being much more marked in these than it is in the individual of more mature years, and (we may add) morphine being peculiarly toxic in children.

Narcotic anesthesia always is contraindicated when pathological conditions are marked in the lung, with consequent limitation of the respiratory area. Astley also hesitates to employ it when there are renal complications, because of the well-known deleterious effect of large doses of opium or its alkaloids in chronic interstitial nephritis.

The chief advantages of hyoscine-morphine anesthesia, as enumerated, are: the ability to maintain a smooth, continued anesthesia, in counterdistinction to the intermittent anesthesia obtained when intratracheal insufflation cannot be availed of; the anesthesia is secured in a pleasant manner, without the depressing influence of fear; and it is followed by postoperative sleep of three to six hours' duration, from which the patient awakes without knowledge of anything having occurred.

Doctor Astley affirms that by complete cooperation of the patient with the attendants it is possible to anesthetize and operate upon an individual without leaving in his mind any recollection whatever of the procedure. Combined with local anesthesia, the narcotic method fills admirably the design of the anociassociation-technic of Crile.

An hour and a half before the time for the operation, 1-6 grain of morphine and 1-100 grain of hyoscine are injected subcutaneously; this dose being varied, however, according to the age and physical or other condition of the patient. No more than 1-4 grain of morphine should be given at this time, and it seldom is necessary to go as low as 1-8 grain. A second dose may be given at the end of twenty minutes, while sometimes a third dose is employed, provided the condition of the patient warrants. The third dose may consist either of morphine or hyoscine alone, according to the reaction of the patient to the one or the other drug, and the addition of apomorphine to the third dose frequently is of great value, in Doctor Astley's opinion.

Our own suggestion is, that the physician should err always on the side of safety. Rarely, if ever, is the third dose required, and usually two doses, consisting of 1-4 grain of morphine and 1-100 grain of hyoscine each, are ample under any circumstance. The latter may be replaced by a few whiffs of chloroform or ether, and this usually is desirable whenever any serious operation is contemplated. By combining the hypodermic with the local anesthesia, after the method of Crile, the quantity of the narcotic required is reduced to even less than that indicated above.

EXOPHTHALMIC GOITER

The symptoms of Graves's disease, according to Israel Bram (N. Y. Med. Jour., Nov. 27, 1915, p. 1095), are the result of an excessive amount of thyroid secretion in the blood. The diagnosis is not always easy, especially in the early stages of the disease. For instance, it may be mistaken for pulmonary tuberculosis, hysteria, neurasthenia or diabetes.

In the majority of cases, according to Bram, it is unnecessary to resort to surgery. From his experience with 24 cases, he is convinced that almost every case of this disease, if diagnosed early, can be cured by nonsurgical treatment. Also, he feels sure that at least 75 per cent of all cases may be

relieved without operation.

The remedy which he finds of greatest benefit in these cases of goiter is quinine hydrobromide, as advised by Forchheimer. It probably yields better results than does any other drug in the materia medica. These patients have an unusual tolerance for quinine, and the hydrobromide may be given in 10-grain doses three or four times daily, without producing any symptoms more serious than slight buzzing in the ears. The usual dose, however, is 5 grains three or four times a day. Under this dosage, quoting Forchheimer, "the tachycardia improves, the pulse frequently coming down, from 130 to 140, to 80 or 90 in forty-eight hours; secondly, the thyroid gland diminishes in size, by measurement; thirdly, the tremor and exophthalmos are the last symptoms to leave."

Given in connection with the quinine hydrobromide, Doctor Bram finds some other remedies of value; for instance, suprarenal gland or pituitary extract will be found helpful when there is low blood pressure; also ichthyol seems to have a very favorable effect upon the appetite and nutrition, while lecithin, which stimulates the resisting-power of the tissues, is especially indicated where the nervous symptoms are prominent. This latter remedy is said to control the tremor

and excitability even more effectually than will the bromides. In order to secure prompt results, the lecithin must be supplemented by a liberal diet; it is, contraindicated, however, when the digestive functions are disturbed.

Several other remedies are mentioned that prove of value in some cases; for instance, sodium phosphate, sodium salicylate, the calcium salts, iodine (especially in goiters of syphilitic origin or those undergoing degenerative changes), and ergot and digitalin, the two latter being useful because they overcome the relaxed condition of the heart and vessels.

Doctor Bram also affirms that physostigmine (eserine) often controls the tachycardia when other measures fail, appearing to be of benefit to some patients. Thyroid preparations he does not consider generally useful, indeed, they often aggravate the symptoms. Such sedatives as veronal, sodium bromide, and hyoscine hydrobromide (the latter used in 1-250-grain doses twice daily) may be prescribed to control the nervous symptoms.

Associated treatment includes rest in bed, suitable diet, hydrotherapy, pressure applied to the neck with a plaster bandage, and electrotherapy.

COPPER SALTS IN TUBERCULOSIS

Basing upon his experience with 5 cases of external and 15 or internal tuberculosis, H. Eggers (Beitr. z. Klin. d. Tub.; cf. Muench. Med. Woch., Jan. 5) arrives at these conclusions concerning the action of copper salts in these conditions:

As has been demonstrated in animal-experiments and thereafter shown also by 5 cases reported by Strauss, copper possesses a definite affinity for tuberculously diseased animal-tissue; and this fact again was demonstrated clinically in the 5 cases of external tuberculosis observed by the author.

The statement is to the effect that the therapeutic action of solutions of copper salts, when locally applied to lupous and verrucous ulcerations, was surprisingly favorable; so, also, inunctions and the internal administration of the remedy seemingly benefited dermatic and surgical tuberculosis. In the cases of internal tuberculosis, the results obtained from the ingestion and inunctions of the remedy were not absolutely convincing. A trial of copper arsenite might be worth while.

1SCCLATICOUS

Eighty-six Years Tonight

S OMETHING lugubriously startling bodies forth as the blurred etching traced on Memory's accusing tablet softly revives.

The recurrence of this fateful anniversary of the stormy midnight just eighty-six years ago reflects that scene, with my fair young mother the central figure of teeming specters clasping her babe of sable destiny. And tonight a mimic tempest rages and a young deluge pours an infant flood without, as if wounded nature mourned and wept over the

perversity of a suffering world.

A year ago tonight, I bent over the story of my past. I was telling you all, anticipating the tranquility of dreamless sleep ere this watchnight might fling sombre shadows in my weird sanctum. Yet, here I am, my mind fresh and crisp, reflecting the scintillation of the most noble and ennobling fraternity that adorns the human race. How fortunate to have lived in the clare-obscure shadows the resplendent brilliancy of this enlightened age vouchsafed me amid my remote seclusion; and to be here, one of you, in robust health and vigorous activity of practical usefulness, seems too incredible to believe.

I have passed through a terrible year of famine, revolution, and smallpox, with unprecedented scourges of other diseases. Smallpox has been of the most virulent, deadly type, often fatal in the early fever-stage, ere ustulation developed-a fact attributed to vitiated vitality from want of food; delirium entering with an initial chill in many cases. And in this fearful ordeal not one successful vaccination was made, all vaccine, even that from the more accredited manufacturers, arriving inert, due to the intense heat prevail-

ing between here and the coast.

My post has been in the center of the pestilence, professionally alone. I have been obliged to combat the stupid ignorance of authority and the filthy carelessness of the people, both, at the inception, asserting the disease to be measles or chicken-pox or scarlatina, in each invasion, because of death occurring without pustules showing, until unprecedented mortality and some pustules elicited sane reason. One plantation, a league from my ofice, had seventeen deaths in a week ere smallpox was admitted to be reveling there; the owner having had the disease at some former time and claiming to know it as well as I and being capable of diagnosing it. There had not been one recovery on the place. Several other plantations were infected, with a 100-percent mortality of earlier cases, most of them dying within three days of the initial Those who survived to the stage of pustulation were nearly completely flaved. the thickly set pustules joining to the semblance of huge blisters, the nose, mouth, and throat being involved in a distressing man-Up to the seventeenth death on the nearer plantation, I had neither been called nor consulted, my original smallpox pronouncement having antagonized the populace and the authority, because all the earlier cases died without pustulating.

The ghastly crisis called forth the masterful achievement of my career. The seventeenth death-the victim dying the day after the chill-prompted me to constitute myself an executive committee of one and to assume a dictatorship of the situation. The poor people had bought all the disinfectants in the zone and burned all the horns they could turn up, but despite which the scourge spread as only smallpox spreads. I collected a large number of kerosene cans and had them transformed into the shape of camp-kettles.* Early the next morning, I was on the nearest infected place, and caused all the clothing and bedding of the inhabitants to be boiled (I did not burn them, because they could not be replaced), and had boiling water thrown copiously on the dirt floors of the infected house, and then persuaded all the people to bathe with water as hot as could be borne

without blistering.

^{*}In Spanish America—as in other half-civilized countries—kerosene is imported solely in stout 5-gallon cubical tin cans. These are avidly bought up by the natives, who cut out the top and provide a bail by nailing a smooth piece of a branch across the middle. These buckets find manifold uses. Thus, all their hot water for laundry purposes is provided by setting these cans directly upon burning logs in the open.—ED.

Three new cases developed during the night, and to these patients a 1-grain dose of calcium sulphide was given every hour, ten times, the fever and delirium disappearing entirely before the hour for the eleventh dose; but the fact is, I do not really know how much earlier the fever had abated, as I was actively superintending other features, having certainty that the doses would be given on time. I then extended the intervals to every two

I also gave a heroic compound podophyllin purge, in the early part of the same night, to every one on the place, there being twentyseven not yet stricken, but ten of whom had been directly exposed. To those ten I gave. each, ten 1-grain doses of calcium sulphide the next day, and one dose three times daily for the three following days. The three infected patients later received one granule every three hours. The other persons on the plantation who were said not to have been exposed were given full dosage of flowers of sulphur every morning and night for a week, with instructions to take a saline purge early in the morning, if the sulphur laxative did not prove sufficient. The three stricken patients were perfectly well in four days. No other smallpox cases occurred on that plantation.

The same process was repeated on other infected places, some half-dozen badly pustulated victims being treated. Calcium sulphide and echinacoid were alternated every hour. Also 10-percent phenol oil was applied to the nostrils, mouth, and throat, apparently with propitious effect. But this was not positively ascertainable with the influence of the calcium sulphide and echinacoid acting in the system, which helped to dry up the pustules quickly. The patients otherwise had uneventful recoveries, not one dying. New cases yielded as readily as those on the first plantation, the infection being arrested with them; and, where first new cases appeared on other places, the fever was broken with calcium sulphide; and no other cases developed under my prophylactic treatment.

Here we have a demonstrated certainty of almost immediate death to the smallpoxgerm, incubated and actively established in human victims up to the highest infectious development; for, my observation, during fifty years, in the experience of combating Mexican smallpox, teaches me that the high fever, before pustulation supervenes, is almost equivalent to inoculation-the moribund and recently dead states being less perilous, while of potent infectious virulence.

I believe that infection is never conveyed by any person, however exposed, before incubation is complete and the fever-stage developed; not even in clothing not in actual contact, such as that being worn, or the bed of a smallpox patient. I can neither confirm nor deny the possibility of woolen clothing becoming infected in a degree to convey the disease by mere casual contact in a room with a patient, as a doctor or visitor, but am certain that cotton clothing is never such carrier-which are the goods used here. There have been numerous such instances in the recent epidemic, and not one infection that was not traceable to positive contact with the diseased person.

In my conception, the infective medium is so completely destroyed by the saturation of a person with calcium sulphide, especially when the dosage begins within a few hours after the inception of fever, that transmission of the disease is not possible to endanger exposed persons; yet, I deem it safer to institute prophylactic treatment of such persons.

I believe, however, that flowers of sulphur given to full saturation would immunize persons in actual process of incubation ere the fever-stage is reached; for, among seventeen persons said never to have been exposed on the first plantation, it is a dubious presumption that some of them did not have germs in their system, amid such terrible infection in closely huddled houses of such careless. filthy people; and those seventeen merely had the sulphur protection.

But calcium sulphide is indubitably a magical remedy, developing in the system some undefinable sulphurous compound, which is eliminated through the pores of the cutis, in strength sufficiently potent to prove germicidal in almost, if not all, cutaneous disease, smallpox the most formidably virulent among them. And I have established the fact beyond the latitude of peradventure that smallpox has been vanquished, in its various stages, by that subtle substance.

But, the 60-percent pharmacopeial calcium sulphide of commerce will not do-the 100percent article of Borroughs, Wellcome & Co. of London, or of The Abbott Laboratories, of Chicago, is what is needed. There may be other makes as good, but I have not come across any, either among French or American

With an abundance of good live vaccine, I might have made a very different fight, but, perhaps with a higher mortality. I obeyed the spur of necessity, employing available makeshifts as weapons; and I regret to know that the prophylaxis is not a permanent protection to persons who have not had the infection. It also remains to be verified whether the aborted cases will prove equally protective as if the disease had run out its course. Still, the fact of infection must insure higher-grade security than any cowpox vaccination can afford, notwithstanding that the disease was killed in the system.

For all that, calcium sulphide will ever be the grand emergency auxiliary in combating smallpox where vaccination lends no protection.

My uninvited battle with this frightful pest won me envy, but also great gratitude—gratitude in preponderating measure among the masses, the people whom I saved and those whom I protected. To the chagrined authorities, who nearly bankrupted the people in buying worthless disinfectants and employing quarantine-guards that did not quarantine, and also the quack fraternity, who assured the public that there was no small-pox, the lines of the immortal poet aptly and pertinently may be applied:

He who ascends the mountain-top will find
The loftiest peaks most wrapt in clouds and snow;
He who surpasses or subdues mankind
Must look down on the hate of those below;
Though high above the sun of glory glow
And far beneath the earth and ocean spread,
'Round him are icy rocks and loudly blow
Contending tempests on his naked head--Such reward the toil that to those summits led.

Mexican hamlet authority exacts obsequious humility, a tribute I never pay, though friction rarely occurs; and never save in issues of public health.

But my humble, commonplace triumph over a mortal foe will provoke no envy or jealousy among the generous fraternity for whose pensive eye this greeting is written.

The life I live is so unlike that of any of you that the spice of your sauce would be gall and wormwood to me; and that is why my final days will pass in this wild refuge rather than where civilized companionship might fail to soothe. Once I was more absorbed; but now my leisure moments are not devoted to medical or to fictitious scribbling; and there is nothing new to read, as newspapers do not reach us now.

The practice of medicine has dwindled to only the better classes, the emancipated poor element being out of the province of medication, since the plantation owners no longer assume the responsibility; and the poor wretches are not able to buy corn, they have

free food no longer, much less free medicines. The famine has emaciated the race, many dying of sheer hunger, while anemia, that becomes dropsical, is rapidly doing the work of extermination.

The people are dying as of the plague, even the prevalent fevers being fatal. The low ebb of the blood stream responds to no treatment in the more desperate cases, while it surely, if slowly, declines. Such children are immedicable, mostly due to the vice of eating dirt; and I have tried to save some men and women among the more hopeless victims, some of whom crept into the convalescent state, but died of relapse, due to overeating improper food, there being no other. Even the middle ranch-class has neither meat, fowl, eggs, milk nor beans. Nor are fair corn and rice crops in process of harvesting, because of the scarcity of workers, the men all being in military service. Inundation has destroyed all crops, from near here below to the coast, and drowned the live stock, as well as many of the people. The concussions of European millions in war are creating a second deluge on earth. Such disastrous floods of high water have never been known here before, nor such torrid temperature, when the sun comes out on high.

The solitude of this big house in which I live and write, whose loneliness is unbroken by the chirrup of a cricket or the nibble of a mouse, is sometimes monotonous in the silent night—wakeful nights haunted by unbidden memories of the loved and the lost. It may be that this is a cherished weakness, yet, it is intensely human. Do none of you, bachelor, widowed or divorced brothers, however the estrangement, ever feel like moaning in your stifled sorrow?

Deep in my soul that tender secret dwells, Lonely and lost to light forevermore, Save when to thine my heart responsive swells, Then trembles into silence as before.

There, in its center, a sepulchral lamp Burns the slow flame, eternal—but unseen; Which not the darkness of Despair can damp, Though vain its ray as it had never been.

Such are little grains in the sands of life; and fortunate are those able to guard them at the bottom of sediments; yet, despite all effort, they persistently bob up in memory ever and anon; as, undoubtedly, they softly rise to all of you, even though some may be too proud to confess the inward weakness.

In the pursuit of fortune and some modicum of evanescent happiness, deemed to be of mortal lot, the best of you fail to attain the coveted goal. The intervention is met of

Circumstance, that impersonal God And Miscreator, who makes and helps along Our coming ills with a crutchlike rod, Whose touch turns Hope to dust—the dust we all have trod. ROBERT GRAY.

Pichucalco, Chiapas, Mexico.

[Doctor Gray wrote this letter upon October 31, his birthday. I give this fact, because so many readers of CLINICAL MEDICINE are interested in the work of this wonderful man. I hope all of you are following his remarkable autobiography, an instalment of which will be found on page 52, this issue.—ED.]

SOME EXPERIENCES WITH ANTITOXIN IN DIPHTHERIA

My first experience with antitoxin was on Thanksgiving Day, 1895. The patient was an Italian girl of seven years, whose throat was literally crowded with diphtheritic membrane. I saw her first in the morning, and in the evening I injected 15 Cc. of the serum-which, if I remember rightly, was one of 1000 units. This was on a Thursday. On Sunday morning, the child's throat was free from membrane and she was sitting up in bed and writing on her slate. By Tuesday, recovery was so far advanced that I paid my last visit. Of course, it really was too soon to leave her to herself; still, the outcome justified my action.

Since then I think I have never failed to administer antitoxin in every case of this dread disease. That is to say, diphtheria was a dread disease before the advent of antitoxin, as every physician who practiced in preantitoxin days will testify; for, since then its treatment has become a comparatively simple matter and the disease little to be dreaded. In the twenty years since this first case, I have lost but one diphtheriapatient, and that was diphtheritic croup. And I ought not to have lost even that one.

The most important lesson I have learned in regard to antitoxin is, that one must use it early. In all ordinary attacks, when this is done, neither large nor repeated doses are needed.

When antitoxin is administered on the first day of the disease, the mortality is practically nil. But, every day of delay increases the danger manifold, in growing ratio. Antitoxin stops the progress of the disease, but it can not undo the damage already done.

The further it has progressed, the greater the danger, and the larger the dose required.

When the patient is not seen or the disease is not recognized, or for any other reason the remedy is not administered until the disease has progressed for a number of days, large and repeated doses are called for. The same is true of those cases which are properly called malignant, even when seen early. Only few of my cases have been of this latter character, and I think I am safe in saying that in nine cases out of ten one early injection of 1500 units has proven sufficient, without repeating the dose.

As might have been anticipated, some mistakes were made in the early days of antitoxin. Our technic was not perfect. We did not understand the need of perfect surgical asepsis as well as we do now. Nor were we able at first to differentiate between the effects of the antitoxin and those of the serum which carried it. Neither was the method of preparation as perfect as now or the product as concentrated. Experience teaches. With strict asepsis, a perfected product, and a proper technic, the danger is so small as scarcely to be considered. Yet, some fatal accidents have occurred, be it from idiosyncrasy, improperly prepared antitoxin or imperfect technic.

An experience which I had about a year ago may be worth repeating. On the last day of November, a case of diphtheria appeared in one of our schools. The school was closed temporarily, and the rooms were fumigated; then the school was reopened and the work went merrily on. About a week after thison December 6, 1914-I was called, toward night, to see a little girl who, with her two sisters, had been attending this school. I found her suffering from a severe sore throat, but no membrane was visible. Nevertheless, the symptoms, in connection with the known exposure, led me to suspect diphtheria. It would have taken at least twenty-four hours, under favorable circumstances, to have received a report from the State Board of Health, and I did not deem it wise to wait. Some may criticize this stand, but I find it sustained by the following from H. C. Wood: "When any case presents the clinical aspect of diphtheria, the antitoxin should be used at once. For educational purposes and for rendering definite our knowledge, the municipal laboratories are very useful; for purposes of treatment, the less attention paid to them, probably, the better for the patients."

So, the next morning I saw the little girl early and decided that the case was one of diphtheria, though the membrane was as yet but elementary. I injected 1500 units of the antitoxin provided by our state board. The girl still was 'round about the house; within twenty-four hours she was improving, and she was never confined to her bed. There were no complications, and the attack was an ordinary one. In a few days, the patient was practically well, though no doubt she still carried germs in her throat.

However, on the fourth or fifth day after I injected the first case (I say the fourth or fifth; we country doctors are so busy looking after our patients that we do not always stop to make accurate records of each step of our doings—thereby lessening, I admit, the value of our reports), her younger sister showed signs of sore throat; so, without waiting either for membrane or report of culture, I promptly administered another 1500 units of antitoxin.

Right here, I may as well remark that probably the best thing I could have done at the outset of the first case, after administering the antitoxin to the sick girl, would have been to give an immunizing dose to every member of the family. You may criticize me for not doing so, and I will not complain. Suffice to say that I did not. And, now, as I think of it, it occurs to me that, had I done so, I should have lost the lessons I learned from an interesting subsequent series of cases, and, moreover, should have labored under a lurking fear that my first (and only) case was not diphtheria.

The second case went on like the first one, and in a week's time the patient was practically recovered. But, before this time came, the third, and last, child in the family was taken with the same symptoms. She, too, received 1500 units of antitoxin, and then went through the same brief course as did the other two. But, no sooner was she well on the way toward recovery, than the mother, who had been taking care of all the three children, was attacked in the same way; whereupon she received the same treatment. She was, perhaps, a little sicker than the girls had been, but was never continuously confined to bed and recovered rapidly.

Meantime the father, who, living on a country farm and away from any near neighbors, had been out of doors much of the time and thought, surely, he would escape, began to suffer from a severe sore throat. Owing to causes which I need not stop to state, I was not able to give him the usual dose of antitoxin until a somewhat longer time had elapsed than in any of the other victims.

The result was, that he was much sicker than any of the others, and was rapidly growing worse when eventually the remedy was administered—1500 units of antitoxin, no more, no less. Had I had another dose, I should have given it, but I did not. Again within a few hours improvement set in, and continued without interruption. He kept in bed more or less, but was never actually confined to it.

This ended the course of diphtheria in this family, the whole course taking less than a month. There were no near neighbors, and no other cases appeared.

The treatment, summed up so far as medical measures were concerned, consisted of antitoxin (1500 units only, in each case), antiseptic gargles, and saturation with calcium sulphide.

J. M. FRENCH.

Milford, Miss.

DIPHTHERIA-ANTITOXIN

It is quite general to speak of the action of diphtheria-antitoxin as being both prophylactic and curative. While the practitioner understands the meanings of these two terms, we are not strictly correct in the use of the word curative. In fact, diphtheria-antitoxin has no curative action whatever. In other words, it does not prevent the development of the diphtheria-organism, nor does it in any way participate in the repair of the poisoned body-cells. Its action, therefore, after the disease is established, is a neutralizing one, and not curative.

The development of the organism of diphtheria in or about the air passages produces violent toxins or poisons and, owing to the generous blood supply of these parts and the very superficial character of this vast capillary network, these poisons are absorbed by the general circulation as they are being formed. This accounts for the rapidity with which the disease manifests itself in many cases.

The clinical picture, so characteristic of this dread disease, is caused by the absorption of these toxins. Except in those cases where mechanical obstruction by the membrane causes death by suffocation, our fatalities are due to the destructive action of the toxin on the various cells of the body, notably the heart and liver. Fortunately in diphtheria, these toxins are absorbed by the blood and are found floating freely therein. It, therefore, resolves itself into what might be called a mechanical or a chemical process

of flooding the circulation with a sufficient number of antitoxic units to combine with

and neutralize the toxin.

Many people possess a natural immunity, partial or complete, depending upon the presence of diphtheritic-antitoxic units in their blood; but in those persons who develop the disease, and who, consequently, do not possess any antitoxic units or only an insufficient number of them, it will be readily seen that the administration of a relatively small amount of antitoxin, previous to the onset of the disease, will fortify their blood stream, and this will be ready and available for neutralizing any toxin that may be formed later.

Thus, briefly and without attempt to enter into the minute details of the process of infection, it will be seen that the use of diphtheria-antitoxin may be grouped under two headings—that of immunization and that of neutralization, or, the socalled curative use.

Immunization is a simple process. It has been found by many years of clinical observation that one or two thousand units of diphtheria-antitoxin, administered upon exposure but previous to the development of the disease, will produce a passive immunity in the individual and protect him for several weeks. If the exposure is continued, especially in children, the immunization should be repeated after an interval of two or three weeks. In the treatment of the disease, however, each hour or day brings added danger and makes it much more difficult to combat.

We have taken the liberty of quoting rather fully from an article by Dr. Wm. H. Park and Dr. George P. Biggs, as published by them in the collected studies from the Bureau of Laboratories, Department of Health, City of New York, 1913. We feel sure that the perusal of this quoted portion will convey the necessity for the giving of large initial doses of antitoxin very much better than is within

our power to do. We quote:

"Numerous experimental studies have demonstrated that a small amount of antitoxin will save when given before or shortly after the injection of toxin and that for each minute that elapses larger and larger amounts are required, until finally no amount will save. The following experiments, in which intravenous injections of toxin were followed by intravenous injections of antitoxin, are so striking that they are given, even though they are similar in some respects to the published results of others. The experiment already recorded indicates that a dose sufficient when given as a single dose is insufficient when

divided into several doses, even though the total amount is increased.

"A number of rabbits were given intravenously ten fatal doses of diphtheria-toxin. At different intervals of time, antitoxin was given; the following amounts were required to save at the different intervals:

"Amount sufficient to save life:

Given a	fter 10	minutes													5	units
Given a	fter 20	minutes			 							. ,		. 20	00	units
Given a	fter 30	minutes	 		 		ï	 	i					.200	00	units
Given a	fter 45	minutes			 			 					 	.400	00	units
Given a	fter 60	minutes	 					 						.500	00	units
Given a	fter 90	minutes												.No	a	moun

"These results emphasize the need of haste in giving antitoxin in serious cases. Fortunately, in the ordinary case the diphtheria-poison has not reached the blood current in any large amount at the time the patient is seen. The severe septic cases have, on the other hand, absorbed a great deal of toxin when we reach them. Here, every minute's delay is of importance. In the moderate cases, delay in giving antitoxin allows the local lesion to advance, but, unless this becomes very extensive, the only harm caused is, delay in recovery. In the severe cases, the intravenous injection of antitoxin is always indicated, as no time is lost due to slow absorption from the subcutaneous tissues. In the mild and moderate cases, the intramuscular or subcutaneous methods suffice. The rapidity of absorption from the intramuscular tissues has been demonstrated, in animal-experiments, to be about twice that from the subcutaneous tissues. Its administration in actual cases of diph theria, in our investigation, did not usually show such an increased rapidity of absorption. This is probably because the serum did not remain within the muscle-sheath. The following dosage of antitoxin is now used by

	Units in Cases						
Mild	Moderate	Severe	Very Severe				
Infants under 1 year 2000	3000	10,000	10.000				
Children 1-5 years3000	5000	10,000	10,000				
Children 5-9 years 4000	5000	10,000	15,000				
Donoone error 10 seeses 5000	10 000	10 000	90,000				

"These doses are selected after considering both the relative degree of danger at the different ages and the importance of size upon the dilution of the antitoxin. The antitoxin should be given intravenously in the very severe cases. In all others, the subcutaneous or intramuscular methods suffice to save life, but do not give as quick results.

"Much smaller injections will suffice to save life in the majority of cases, but the larger doses advised will produce quicker local and constitutional effects and will in the more severe cases undoubtedly save some lives which would otherwise be lost. "It is conceivable that even larger doses might save an occasional life, but such a result is certainly rarely to be hoped for.

"The giving of antitoxin intravenously adds many times to its unit-effectiveness. Every 1000 units given into the circulation is worth at least 4000 given subcutaneously. When only small amounts are available, the antitoxin should be given intravenously."

RICHARD SLEE.

Swiftwater, Pa.

ANAPHYLAXIS AND "SERUM-SICKNESS" CAUSED BY ANTITOXIN INJECTIONS

The criteria governing the functional and other disturbances in anaphylaxis are more or less peculiar to each species.

Generally speaking, the symptoms produced by different proteins are quite uniform and characteristic in the same species, while in different species the symptoms may vary, because the same organs are not involved to the same degree; and then, again, the methods and degrees of sensitization vary with each species. The guinea-pig requires only a single minute dose of a given protein, then, after an incubation-period of ten days, the animal will be acutely sensitized to the same protein, and will remain so the rest of its life.

If the guinea-pig receives injections, say, every three days, of the same protein, it will show no symptoms. In other words, it will not become sensitized as long as these spaced injections are continued. If, though, the injections are discontinued for ten days, the animal will become sensitized. With the rabbit, spaced injections daily or weekly, will sensitize, and after about the sixth to eighth injection the animal will die of acute anaphylaxis. A single injection will not acutely sensitize a rabbit.

In human beings, the ordinary symptoms of "serum-sickness" are so familiar that it is hardly necessary to mention them: urticarial and erythematous eruptions, local and general edema, swelling of the lymph-nodes, pains in the joints, headache, weakness, fever, and leukopenia.

Any or all these symptoms may follow the first injection of therapeutic antisera. The symptoms usually appear after about eight to twelve days, and in these cases it is not clear how sensitization has been produced. It has been assumed that some of the serum remains unchanged, possibly in the skin at the point of injection, until enough of the substance required to cause a reaction with

the unchanged serum has been produced by the body. If serum is reinjected a week or more after the first injection, there may develop an immediate reaction, with marked local changes, even from a small dose of serum, and sometimes, though rarely, followed by severe symptoms and collapse. In these cases, the conditions and general picture of anaphylatic phenomenon are reproduced classically.

"Serum-sickness" and the conditions described were more common some eight years ago, when native sera were used, from horses immunized against diphtheria, and in a similar manner against tetanus, than we now experience from the partially purified antisera.

The first successful research on purifying these antisera for therapeutic use was carried out in the Research Laboratories of the New York City Health Department, eleven years ago, by Doctor Gibson. Although this first purification was a disappointment, so far as materially lessening the constitutional disturbances were concerned, it did stimulate further research, which the writer completed. Every year since then, the purification has been made more and more successful, and now constitutional disturbances are a rarity. We always shall have certain individuals hypersensitive to foreign proteins, just as certain individuals are hypersensitive to strawberries, chocolate, certain sea foods, and the like.

E. J. BANZHAF.

New York City.

[Doctor Banzhaf, as some of the readers of CLINICAL MEDICINE may know, is an authority on the making of antitoxin. In his work in the Research Laboratories of the New York City Department of Health, he has developed the method of concentrating and purifying the diphtheria antitoxin, as begun by Gibson. The method now generally employed by advanced manufacturers of this remedy is known as "the Gibson-Banzhaf method."—Ed.]

COLDS, AND THEIR TREATMENT

In your comment on Doctor French's thought-producing article, in the October number, on colds, you ask your readers for suggestions.

I have found, by long experience, that there are two kinds of "colds." One is simply a congestion of the mucous membranes of the respiratory tract, caused by the cold driving the blood from the surface of the body and congesting the nose, throat, bronchi or stomach. The latter is not generally recognized by even the doctor. But I have seen many cases of "colds" of the stomach as positive as any of the respiratory organs.

The second kind of colds is germ-produced. and these belong to the influenza-type of disease. Treatment of the "cold"-colds is simple, if taken in time. First flush the skin -gelseminine, aconitine, atropine, quinine or pilocarpine will do this satisfactorily, if the temperament of the patient is understood, and then the remedies are adapted to each patient's requirements. The one who is troubled most with head- and nose-symptoms will be relieved quickly by gelseminine hydrobromide and keeping in bed. In those whose bronchi are most congested, aconitine and atropine are beneficial, or quinine for persons who are not susceptible to the effects, produced by this alkaloid, on the hearing.

The germ-produced colds require antiseptic sprays, calcium sulphide, and gelsemium. A spray of Lugol's solution often will work wonders in influenza. As soon as the acute symptoms subside, give the compound hypophosphites and nuclein. [Triple arsenates with nuclein is hard to beat for

this stage.-ED.]

For the cold in the stomach, prescribe mild cathartics and atropine, followed by

hydrastis in some form.

Seen early, all these colds can be aborted, except in persons who have chronic catarrh of the respiratory tract or stomach. I have seldom seen a person who had a cold in the air-passages and stomach at the same time.

THOS. W. MUSGROVE.

Sultan, Wash.

[Doctor Musgrove's classification is interesting, and his method of treatment excellent. I am sure it will "work." However, I have my doubts about there being any purely "congestive" and non-infectious type of a cold. When the secretions of a patient suffering from such an ailment are examined they tell strange stories. For instance, Doctor Biehn has just been telling me about an unusual type of "cold in the head." A bacteriological examination of the nasal mucus revealed the presence of a strangelooking organism which "looked" like a Friedlander bacillus, but was non-capsulated. Further investigation showed it to be colon bacillus—in the nose, of all places!

As to the stomach "cold," I am reminded of an article which appeared in *The Illinois Medical Journal* recently, in which Hinkelmann showed that cases of the socalled "intestinal influenza" were really presenting enormous numbers of the bacillus of winter cholera. We live and learn!

Whatever the bacteriology of the "cold," Doctor Musgrave's method of treatment should commend itself to discriminating physicians. It can be built on to or modified

to suit individual needs.

There is a type of colds tending to chronicity or recurrence. In my opinion, these should be treated with autogenous bacterins. Doctor Biehn is greatly interested in these cases and will advise you in any that are proving troublesome. Write him—and send him cultures from the secretions.—Ed.]

FOLLICULAR TONSILLITIS

Follicular tonsillitis, frequently associated with rheumatic complications, is the most common kind in our country practice. Its sudden onset with chills and fever, with temperature often high—up to 102° to 105° F.—swelling and pain, pain usually severe, with excessive secretion of mucus, and great difficulty in swallowing, are all characteristic and will usually serve to distinguish this from the more severe forms, such as diphtheria, croup, and streptococcic sore throat

Treatment can be made curative, provided it is instituted early and is vigorous and thorough. A hot mustard foot-bath should be given, then the patient put to bed, well covered, in a half-sitting posture; for patients can scarcely ever be made to lie down.

A light ice-bag applied to neck from ear to ear is one of the best remedies to relieve pain and reduce engorgement; and best results are obtained if one can have a trained nurse to apply it, as I find so many people are afraid of it and will not use it as directed.

For an adult, I give calomel, 1-10 grain, calcium sulphide, 1-8 grain, the defervescent compound, and hyoscyamine granules, one of each once an hour (in severe cases every half hour) till ten doses have been taken. Then a teaspoonful of saline laxative once an hour, till three or four doses are taken; after which a dose two or three times a day, as needed. Also a teaspoonful ferrosalicylate (Wm. S. Merrell's) every two hours, till better; then every three to six hours.

In rheumatic cases, this gives most excellent results. If fever persists, the defervescent compound is continued; and, if there is much depression, cactoid, strychnine, and nuclein are added—hypodermically, if much difficulty in swallowing exists.

If the patient can use a gargle, a solution of equal parts of listerine and peroxide of hydrogen is very good to clear the throat of mucus. For the pain and distress, a tablet of phenacetin and salol on the tongue makes one of the most effective remedies, and is especially good in streptococcic sore throat. The ordinary tablets do not taste bad, but would probably be better made up into regular throat-lozenges.

Neglected cases, and even some under the best of treatment, will end in suppuration, and, if spontaneous rupture does not occur in a reasonable length of time, I put a goodsized cork between the patient's teeth and, with the forefinger force an opening. I have discarded opening a tonsil with the knife.

W. A. MARNER.

Miles, Ia.

STREPTOCOCCIC SORE THROAT

The public in general consider sore throat (that is, not diphtheria) a simple matter and not infectious. People do not take any precautions with regard to the spread of the disease, and it is not an uncommon occurrence to see an entire family sick with tonsillitis, all having been originally infected from one member. The smear from the throat of such case sent to the health-office or bacteriological laboratory invariably comes back negative as to diphtheria.

The mode of onset is, as a rule, sudden. There is a chill, followed by a fever and the complaint of a feeling of sore throat. The throat at first is red and in a few hours a thin patch of membrane may be detected upon one tonsil. This membrane may, in some cases, even spread and involve the pillars of the fauces or the uvula. As a rule, it is not as thick as the diphtheria-membrane, but may be quite tenacious, and leave a bleeding spot when removed. The breath may be quite offensive, such as is usually found accompanying cases of diphtheria, and the patient very often complains of a feeling of weakness and prostration when attempting much exertion. Having been given such a clinical picture, I have found it to be almost impossible to make a differential diagnosis between diphtheria and a nondiphtheritic sore throat without the aid of the bacteriological aboratory.

My experience in streptococcic sore throat has taught me to consider this form of sore throat to be as grave a condition as a true diphtheritic sore throat. I believe that most of the cases of rheumatism following tonsillitis are of this type of infection. I know from clinical experience that cases of endocarditis may follow such an infection.

Some time ago, I was called in consultation to see a patient who had been operated upon by one of our throat-specialists here in the city. At the time of the operation, there was a slight inflammation and a small membrane upon one tonsil. The operating surgeon disregarded this inflammatory condition and proceeded to remove the tonsils by enucleation. In a few days, there appeared unmistakable signs of a mastoid abscess, and then the child was operated upon for this complication.

At the time that I saw the child, the temperature was running the typical course found in thrombosis of the lateral sinus, that is, the temperature would shoot from normal up to 105° and 106° Fahrenheit in an hour or two, then in a shorter time drop back to normal. Cultures made at the time gave an almost pure culture of streptococci. An autogenous vaccine was prepared, and this was used for about forty-eight hours; for, the parents seemed very much opposed to further operation. At the end of this time, the conditions being very desperate, another surgeon saw the patient, and he concurred in the opinion that the lateral sinus should be uncovered and possibly ligation of the internal jugular vein made-which finally was

The child eventually recovered, but all of this could have been avoided if the primary operation had been deferred until the inflammation then present had disappeared.

Another case which I had under my care was that of a young man who was attending college in one of our eastern universities. He contracted what he thought to be simple tonsillitis. He was under the care of the college-physician for about a month before he came home. I found one tonsil about half gone and a deep craterlike ulceration in the remaining portion. The anterior pillar also was deeply ulcerated. The entire throat was red and inflamed, making swallowing very painful.

I thought at first I had to deal with a syphilitic sore throat, but the young man absolutely denied any infection. A smear from the throat was sent to the laboratory and the report came back, with of the presence

of streptococci and Vincent's spirillum. I tried the usual antiseptics, such as argyrol, 5-percent solution of nitrate of silver, and the like, without getting any impression upon the ulceration. Eventually I used pure carbolic acid, neutralized with alcohol, and this healed up the ulceration.

There was another case of a young lady, a student at our university, who had a sore throat that in all particulars seemed typical of diphtheria; yet, three or four smears sent to the laboratory gave negative results; but, on the last report, the bacteriologist indicated that the infection was one of streptococci.

In about a week after the patient was dismissed, she began to complain of rheumatic pains in various portions of the body. The rheumatism became progressively worse, until at the present time she has become a complete invalid. There is a marked valvular murmur, due to endocarditis, and there is also a stiffening of the joints to such an extent that she can not get out of bed or feed herself. All forms and manner of treatment have been used in her case. Antistreptococcic serums, used in the beginning, had absolutely no effect. Rheumatic phylacogen was given a thorough tryout, through the courtesy of Parke Davis & Co., but with absolutely negative results. The salicylates were absolutely negative. She has tried all schools of practice, and I believe at the present time is under the care of a "magnetic healer." I cite this case, to show how seriously streptococcic infection in the system may affect a patient.

My treatment of streptococcic sore throat is, first to have the throat swabbed every four to six hours with a 10-percent solution of argyrol. As internal treatment, I saturate the patient with calcium sulphide. If there is much aching, I give aspirin or sodium salicylate. For the fever, I rely upon aconitine. In some cases, if the inflammation has subsided but the tonsils remain large and more or less sore, I put the patient upon phytolaccoid. Sometimes the red mercurius, in doses of about 1-1000 of a grain, will give excellent results in this form of sore throat. The combination tablet containing aconitine, bryonin, atropine sulphate, and mercuric iodide is ideal in any case of sore throat. In the beginning of the attack, I always give a course of calomel. I do this first, in order thoroughly to clean out and clean up the general system. I do it, secondly, because of the resolvent action of calomel upon glandular

There should always be an examination of the urine, as it is not at all uncommon for a nephritis to develop. As in diphtheria, the diet should be nutritious and easily assimilated. The patients all do better when confined to bed. If possible, the patient should be isolated from other members of the family, and in all cases the parents should be warned that dishes and all else used by the patient should be boiled.

CLIFFORD E. HENRY.

Minneapolis, Minn.

SORE THROATS: HINTS ABOUT TREAT-MENT

For the sake of brevity and convenience, we will say there are just two classes of sore throats—the acute and the chronic.

The acute ones can all be greatly benefited, and many of them cured, by thorough spraying with a saturated solution of sodium salicylate and fluid hydrastis. Where there is any fever, aconitine, acetanilid, and sodium salicylate in solution should be given in small and frequently repeated doses, until all fever is gone. If the glands are swollen, tincture of poke-root should be added to the fever-solution; and where the patient is seen early and there is profuse secretion, atropine may be added to advantage. Of course, the bowels should be thoroughly cleaned out, and kept clean.

Diphtheria may go into this class and receive the same treatment, the antitoxin also being given when required; but, if the first plan is well carried out antitoxin will seldom be required. I have used it but once in fifteen years, and I have not lost a case of diphtheria in that time.

When there is a tendency to croup, the patient should be saturated with calx iodata, and the iodine preparation will help out in nearly all acute or chronic cases.

No matter what these troubles may be named, success comes in these cases by giving all the remedies to effect; the sodium salicylate should be pushed to saturation, and, where the glands are involved, the tincture of poke-root also.

All chronic cases are greatly benefited and many of them cured by mopping the throat out well with a solution of iodine, two or three times a week, commencing with a weak solution and gradually working up to full strength of the tincture. But, strange as it may seem, I never have had a patient complain of any pain or discomfort when I used the full-strength tincture from the very start. All chronic sufferers require, and should have, a good general alterative, or, what we older

fellows call a "blood-medicine"; and, as in the acute cases, the alimentary canal and all the glands in the abdominal cavity should be stirred up and put to active work. In other words, the whole sewer-system should be flushed and kept flushed. They have all become torpid and lazy and require whipping up. M. E. JOHNSON.

Pittsburg, Kans.

[In diphtheria, no doctor should take chances or temporize. Give antitoxin in every instance, and give enough. Doctor Johnson has been lucky, but you or I have no assurance that our cases will do as well as his. Having had diphtheria in my own home, I tell you frankly that I fear it.—ED.]

ACUTE SORE THROAT AND HOW I TREAT IT

The acute sore throat may be due to one of many causes, while its treatment rests largely upon the etiologic factor, in many instances; although, in the main, we use practically the same remedies in every case—that is, the agents for overcoming conditions peculiar to all.

A goodly number of us have come in contact with the sore throat due to streptococcic infection—the rheumatic sore throat—and it has given us a considerable amount of worry, as it does not, seemingly, submit to the

ordinary remedies.

In this condition, as in rheumatism, I have found the salicylates giving good results in some cases. These should be pushed, as in rheumatism, to the limit, and, if used early, they will, I believe, give good results. It is possible that the strepto-bacterin or the streptococcic serum will give good results. They are, surely, indicated and should be given a trial. In these cases, atropine acts as a synergist to the salicylates, in that it carries the blood to the surfaces and thus relives the local congestion or inflammation. Aconitine is another agent which has its indication, if there is general elevation of temperature. In all these cases, I find that the initial calomel purge, followed by a saline laxative, seems to make the subsequent treatment more effective. I have not employed the lactic-acid bacillus as a local application in the rheumatic sore throat, but it would seem to be indicated.

In the earlier stages of tonsillitis, I have found nothing which gives me better and quicker results than the tonsillitis compound, consisting of aconitine hydrobromide, gr. 1-3000; bryonin, gr. 1-500; atropine sulphate, gr. 1-1500; and mercuric iodide, gr. 1-100. In the beginning, a tablet containing the above is given every half hour, until the atropine-effect is shown, and then at less frequent intervals, to hold such effect. In several individuals in whom tonsillitis had previously gone on to suppuration, the relief has been marvelous, the inflammatory process receding rapidly and with absolutely no purformation.

I have in mind one patient who had quinsy with great regularity, for years, but would not submit to tonsillectomy, and who found relief, whenever his throat became the least bit affected, by the prompt use of the above combination. For the past four years, he has not had a single attack of quinsy. He told me that he is never without his tonsillitis tablets. As a synergist to the combination named, I paint the affected tonsil with tincture of iodine, if seen early, and this seems to have a good effect.

When an acute laryngitis is seen early, the initial purge of calomel, followed by a saline laxative, is given; and this, followed by aconitine, hyoscyamine, and strychnine at frequent intervals, to obtain the aconite effect as early as possible; and this, in combination with iodized calcium, 1-3 to 1 grain, at intervals of from two to three hours, will,

as a rule, abort the attack.

For its local effect, a menthol gargle gives temporary relief; but, so far as a curative effect from gargles may be concerned, I have always had my doubts. Be that as it may, the gargle of menthol, in combination with alkalis, has a soothing effect, and, whether it assists in overcoming the condition or not, should be used because of at least the comfort given the patient.

The tonsillitis combination mentioned above is also useful in this condition. Nuclein, through its power to increase leukocytosis and thus to favor destruction of the infecting agents, should be indicated in every case. Calcium sulphide, as a general antiseptic and to control the exudate, should be pushed to the limit in all such cases. Hot compresses to the throat (epsom salt) give relief, as also do inhalations of medicated or plain steam. Both act as relaxants and favor a lowering of the congestive process. Potassium dichromate granules, to be dissolved on the tongue, are effective in some instances.

In acute pharyngitis, the initial purge is invariably indicated, preferably with calomel and podophyllin, followed by a laxative

saline or castor-oil. To relieve the local congestion, atropine and aconitine, pushed to effect, at short intervals of dosage. These also act to overcome any general rise in temperature. Potassium dichromate is also indicated in such condition and may be given either in solution or a tablet of 1-64 grain may be dissolved slowly on the tongue every hour or two. Iodized calcium, gr. 1; mercuric iodide, gr. 1-64; strychnine arsenate, gr. 1-128; phytolaccoid, gr. 1-6; with nuclein, m. 2, may be alternated with the potassium dichromate, with good effect. Cold compresses of epsom salt, to the neck, changed every hour or two, give comfort to the patient and assist in the effect of the other remedies. If the atropine and aconitine are administered early and pushed to full therapeutic effect, this condition is usually aborted.

There should be frequent examinations, to ascertain the infecting agent; and a bacterin, either stock or autogenous, may be added to the treatment, as outlined above, with good effect. Always suspect and look for diphtheria, and, if found, use the antitoxin in such dose as will be properly effective.

Some will tell us that catarrhal croup is invariably diphtheria; but, it is my belief that we may have a croupy sore throat, due to the micrococcus catarrhalis and streptococcus, and without the presence of the Klebs-Loeffler bacillus. In croup, no harm is done if diphtheria antitoxin be given, and this should be administered if there is the least doubt.

However, in the simple catarrhal form—nondiphtheritic—iodized calcium, 1-3 grain in hot solution, at intervals of from ten minutes to a half hour, seems to be a specific. If there is dyspnea and the congestion is marked, apomorphine, hypodermically, or lobeline, either hypodermically or internally, are indicated, alternated with iodized calcium. These act to overcome the spasm and to relax the throat markedly. Cold compresses to the throat are also useful in croup and give the child considerable comfort.

It goes without saying that the bowel should be emptied and thereafter kept clean. We know that many cases of croup are seemingly caused by previous heavy meals and a consequent retained residuum in the alimentary canal. After the initial purge, the intestinal antiseptics should be used, so that the bowel may be rendered and kept clean. Invariably bear in mind the possibility of diphtheria, in all instances, and be ready with antitoxin when there is the least suspicion of that disease.

This does not, of course, comprise all the throat conditions encountered, but is a list of the commoner ones—the ones we see in our everyday practice.

GEORGE L. SERVOSS.

Reno, Nev.

ECHINACOID IN SORE THROAT

When treating sore throat, try echinacoid in connection with other remedies. Then, after the acute attack has subsided, for the reduction of the local congestion, try calcarea fluorica 7x and natrium mur. 3x. They may be given in combination.

D. E. CRIPE.

Hillisburg, Ind.

THROAT TROUBLES AND HOW I TREAT THEM

Follicular Tonsillitis .- First clean out the bowels thoroughly with calomel and podophyllin followed by a laxative saline. Occasionally, instead of the calomel combination, I give two compound cathartic pills. For reduction of fever I administer the defervescent compound (aconitine, veratrine, and strychnine arsenate), together with atropine in small doses. When indicated, I also prescribe bryonin; and I likewise give 5 grains of sodium salicylate (natural) hourly for a few doses. Calcium sulphide, 1-2 grain, and echinacoid, 1-2 grain, are administered every hour for the first day, and after that every two hours. As a gargle, I prescribe a solution of 5 to 10 drops of carbolic acid in an ounce of water, a little glycerin being added. This must be employed hot. I generally swab the tonsils once or twice with a 10- to 20percent solution of silver nitrate, to be neutralized immediately by gargling with

Suppurative Tonsillitis.—The treatment of this form of sore throat is the same as the preceding, except that I open peritonsillar abscesses just as soon as pus forms.

Laryngitis.—If there is elevation of temperature, I reduce it with the defervescent compound granules, as described above under follicular tonsilitis. I also push emetine and calcidin, or sometimes apomorphine and calcidin. The bowels are kept open with the remedies already advised.

Diphtheria.—I swab the throat with the strong silver-nitrate solution, as described under follicular tonsillitis. Antitoxin is given as early as possible and in large doses, 5000

units being injected even in the very mild cases. In all the more serious cases I administer 10,000 units or more. To immunize members of the family, I give each one 1000 units of the antitoxin.

H. Noble Crandall.

West Springfield, Pa.

PERSONAL INSTRUCTION IN NON-SURGICAL SPECIALTIES

We have just learned from Dr. G. N. Murphey, of Paducah, Kentucky, that he is contemplating giving, at his home, a week's course of practical instruction in the nonsurgical treatment of cancer, hernia, and hemorrhoids. It is probable that this course will be given in the week beginning February 20, although we presume this is subject to change. Readers of CLINICAL MEDICINE will recall the two papers on cancer that Doctor Murphey has contributed to this journal. Anyone interested should write directly to the doctor.

PECULIAR GLEANINGS FROM THE LAITY

I guess the old saying that "we never get too old to learn" is as true now as ever before. Here is a new one for me; however, it may be very old:

A lady who had been married for a period of ten years and had given birth to one child, a son, came to me in a pregnant condition and asked me to attend her in her next confinement. So, I ascertained as nearly as possible all of the facts regarding her former pregnancy and labor. She told me that the former physician who had charge of her during her former pregnancy and labor, every morning for three months before she was confined came to her residence and "used a stretcher on her to make labor easy." I guess I am a long way back on the shelf, but I have to admit that I have never heard of such a procedure. If I am behind the times, will someone put me right and tell where I can obtain one of the "stretchers"?

I was listening to a conversation between two ladies, over the telephone, and one of them had a child that had "croup," and the mother was telling the other one about it. The neighbor, who is always ready to give advice regarding the practice of medicine, told her that, if she would "tie a silk cord around the child's neck it will not have the croup, and, if it already has it, it is sure to relieve it." She said, "If you have not the

silk cord, just take a piece of silk cloth, and it will do about as well; but, really, it should be the cord." Strange that the men who have spent years in research have not discovered this fact—if fact it is.

I overheard a conversation between two ladies in regard to the cure of neuralgia. One of the parties was a sufferer from periodical attacks of the disease, and her friend was glad to tell her that all she had to do was to "procure a nutmeg, bore a small hole through it, run a string through the hole and tie the string around the neck," and she would "never have trouble again." She also stated that it would relieve the asthma. I have never tried it, but I can not believe it has any therapeutic effect on either disease. Do you?

A colored woman came to my office a few days ago and brought a child with her who had been sick about two weeks. I found that she had enlarged tonsils from inflammatory deposits, and this is the treatment that she had been giving the child: "Doctor, I heard that cow-chip tea, made from dry chips, would relieve the throat trouble, if the tea was made strong; also to apply a mass of the fresh 'pile' to the angles of the jaw, and it would always give relief." I asked her if the tea was strong, and she said it was, as she would taste each new batch before giving it to the child. I ascertained that the patient had drunk about three gallons of this abominable stuff before I saw her. I told her that I had always heard that the tea was to be taken by the mother of the child, instead of the child, but advised her not to do it, as she might get the "foot-and-mouth" disease after imbibing freely.

How many times have you been waiting for the uterus to contract and bring on pains for the expulsion of the placenta, after the child had been born, and some "kind lady" would say, "Blow in your hands and the afterbirth will come away right now"? More information for the M. D. from the "laity."

It is going the rounds in this country that, if you have warts, all you have to do is, "tie a knot in a flax string for each wart on the body, then 'spit' on the string and bury it at the root of an ash-tree, and the warts will disappear as if by magic." If this will do the work, why not treat them in this way these hard times, instead of using our drugs? Economy!

Have any of the brethren learned how to "tie off" the chills? If not, they are welcome to the following, and may profit thereby: Have

the patient go to a dogwood-tree and tie a string around the tree, then tie a knot for each chill he has had, then walk backward from the tree as many steps as he has had chills, then turn around and go away from the tree, and he will never have another chill—so I have heard.

If you ever have a patient with nosebleed, tie a string around each little finger,

and it will stop it-they say.

I am living in a community that has the average enlightenment, but these things are still in their minds, and we can not tell how many generations will pass before they are obliterated. I do not think there is enough teaching by the medical men of our country, or these superstitions would not persist. When I hear such rot as the above, I discourage it and ask people to reason in the matter, and see if there is any change made in disease by such foolish sayings or doings.

ARKANSAS.

NEW METHOD OF TREATING DIABETES

The new treatment for diabetes developed by Dr. Frederick M. Allen of the Rockefeller Institute for Medical Research has won the indorsement of a number of prominent physicians in this and other cities where it has been tested at hospitals. It is known as the starvation-treatment. Dr. Elliott P. Joslin, of Harvard Medical School, who is also connected with the Nutrition Laboratory of the Carnegie Institution has expressed his unqualified approval of this treatment. Another enthusiastic indorser of the "starvationtreatment" is Dr. Lewis Webb Hill, of the Massachusetts General Hospital, where the method has also been tried out for about a year and has been adopted for general use. Doctor Hill recently published a small book, to assist the general practitioner in adopting the "Allen treatment." This book tells of the results obtained in the Massachusetts General Hospital and presents a series of the diets used at the hospital.

It is no exaggeration to say that the advance in the actual treatment of diabetes mellitus during the twelve months just passed has been greater than in any year since Rollo's time. It seems that Allen's modification of the classical treatment of diabetes has been in use for only a comparatively short time, but it is already clearly proved that he has notably advanced the treatment of the disease. One of the difficulties likely to prevent the wide adoption of the treat-

ment at the present time involves the detailed knowledge of food composition and calorie value.

In carrying out the Allen treatment, the physician must think in grams of carbohydrate and proteid—it is not enough simply to cut down the supply of starchy foods, but he must know approximately how much carbohydrate and proteid his patient is get-

ting each day.

Doctor Hill describes the treatment administered at the Massachusetts Hospital. The patients are kept on ordinary diet for the first forty-eight hours after entering the hospital, so that the severity of their cases may be determined. They are then put to bed and given no food whatever, except whisky in coffee, until they are sugar-free. Under this method, the system is very rapidly rid of sugar, all evidence of it disappearing in two or three days in most cases, and the longest length of starving any patient is four days. In a very few cases, however, eight or nine days were required; but this did not seem to injure the patient. When the patient is sugar-free, he is allowed to eat small quantities of vegetables.

When this meager diet is commenced, the vegetables must be boiled in three changes of water, to rid them of as much carbohydrate as possible. A glance at the diet of a patient after the original starvation shows that there is little danger of overeating.

Breakfast consists of 4 tablespoonfuls of stringbeans and 4 tablespoonfuls of asparagus, with tea or coffee; dinner, of 2 tablespoonfuls of carrots and three of spinach, with tea or coffee. To make up for the short rations earlier in the day, the patient is allowed 12 slices of cucumber and 6 pieces of celery at supper, with tea or coffee. The diet is gradually increased to include cabbage and onions, and in the third stage to include bacon and other foods.

One of the new features of Doctor Allen's treatment is, that the patient is never allowed to return to what is generally considered a normal diet. Previous to his development of the new treatment, it was generally considered by physicians that recovering diabetespatients should take on flesh, to help build up resistance against "wasting disease." Doctor Allen argues that a patient should remain under weight always, even after recovery from the disease, to prevent a recurrence of its symptoms. In 44 patients admitted to the hospital, who were chosen because their cases were the most severe of a considerable number of applicants, it was

proved that it is possible to eradicate completely all traces of sugar by means of the starvation process. The greater part of the patient's stay in the hospital is devoted to the simple method of controlling his own condition through diet and in keeping down his weight.

Doctor Allen concludes that patients generally accept the radical treatment, with its quick relief, in place of weeks or months of privation heretofore used in stopping glycosuria.

L. K. HIRSHBERG.

Baltimore, Md.

The Allen starvation treatment of diabetes now has "the center of the stage," and it is being very warmly praised. We believe every physician should be familiar with it-but should be cautious in trying to put it to the test. Somehow, it brings us back to that old, old lesson, which we have been trying to drive home all these years, i. e., the importance of the alimentary canal as a factor in producing and perpetuating so many of the serious diseases. It strengthens our faith in "cleaning out and keeping clean"-in the judicious use of simple laxatives; in the administration of intestinal antiseptics; and in the use of such remedies as cultures of the Bulgarian bacillus. "Look to the bowel!" That will continue to be the first word of the thoughtful physician.

In a recent number of *The Boston Medical* and Surgical Journal, Doctor Allen has suggested another somewhat revolutionary idea regarding diabetes. He believes these patients should be given plenty of exercise—not exhausting exercise, but enough to keep them hard and make them relish their meals. Walking, rowing, playing tennis, golf, are some of the things he suggests.—ED.]

CURE OF IMPETIGO. — REMOVING IODINE STAINS

Last week I had a case of impetigo to treat. I tried all the remedies that "ought" to have helped, but didn't. I remember reading in the CLINIC, a month or so ago, the suggestion to use oil of turpentine. I decided to try that, for the condition was getting bad and the family was getting uneasy. Well, when I took the turpentine dressing off, the impetigo was much improved, and thereafter it was easily cured up with dusting-powders. That one issue of CLINICAL MEDICINE surely paid for a year's subscription—although I had to accept in payment from

these people a load of wood. I forgot to say that I kept the patient saturated with calcium sulphide.

I have found a new use for calcium sulphide, namely, to remove iodine stains. Just dissolve a tablet of the sulphide in a little water and rub this on the skin stain. The color comes off quicker than by any other way I have tried.

F. J. AUSTIN.

White Cloud, Kans.

MORE TREATMENT FOR MALARIA

Apropos of Doctor Spiedel's letter about the cure of malaria without quinine, published in CLINICAL MEDICINE some months ago, I wish to put on record with you a method I used successfully in 1898, when it was rather common, in this section, to find a number of soldiers crippled with Cuban malaria of a very obstinate type.

A captain of the 71st Regiment of the N. Y. National Guard, who had been treated in the ordinary way for months, supplied the first case. He had had two "congestive chills" that nearly proved fatal. During convalescence, I had him come to my office for tonic static electrical treatments and he promptly got strong and well. He was also taking quinine and tablets of iron, arsenic, and strychnine.

My next case was a "rough-rider," and he made such a prompt and marvelous recovery, after months of the usual treatment and persistent debility, that the news of it spread rapidly, and officers and privates of volunteer and regular reguments flocked in for "the cure." I tried to arrange with a young doctor of the neighborhood, to make blood examinations in all these cases, as I was too busy to do this myself, but he failed me. There was but one case where an examination was made, and he was reported to have had malarial plasmodia distinctly before he came to me. All symptoms disappeared after three treatments.

I have never reported these cases as I had not been able to get the blood tests made before and after treatment. I have used this method often since that time, with success and satisfaction to myself, but as it is somewhat severe, not everyone will stand for it, even to be cured. The treatment is as follows:

For about five minutes, I draw off from the patient, who is heavily surcharged with static electricity, big, percussive sparks with

the negative "large ball" electrode, being careful to avoid all tender spots. This sudden discharge of accumulated electricity in the body seems to give the malarial growth such a sudden shock as to destroy its vitality. No other treatment is required. Usually, the malaria and resulting debility disappear after the first treatment; but I have never felt satisfied unless six or seven of these treatments have been administered on alternate days.

All of my patients (forty-five or fifty) were anemic, much enfeebled, and subject to chills recurring at varying interva's (every 7 to 30 days). After treating the first three or four cases in this manner, I discarded all medication, other than the occasional use of a laxative tablet o aloin, belladonna, strychnine, and cascara. The recovery of health and strength has always been prompt and lasting in the cases I have been able to follow up. They all quickly lose their muddy complexions and anemic appearance,

I would like very much to learn if others have had experience with this method of nonmedical treatment of malaria, and if so, of

and acquire a good healthy color.

their results.

THOMAS R. SAVAGE.

New York City.

THE CAUSE OF SCURVY

In the November number (p. 1068) of CLINICAL MEDICINE, Doctor Evans makes the assertion that potassium-poisoning is a cause of pellagra and scurvy; however, I beg leave to express a strong conviction that so far as scurvy is concerned he is mistaken. In a paper published as long as twenty-five years ago, it was conclusively demonstrated that in every instance of an outbreak of scurvy the salted meats in use emitted a stinking odor during cooking (namely, salt beef and pork and, in the cases occurring at the York Factory Hudson Bay Company port, north of Winnipeg, salted wild geese); while, on the other hand, with the same diet of beef, pork, and goose, salt-pickled, but free from decomposition-taint, no scurvy occurred among those people.

Now a word concerning the York Factory cases, the only place in the Northwest where scurvy was known to exist. The wild geese were shot in great numbers during their fall migrations. Their entrails were removed and then a little salt was rubbed inside each bird, which toward springtime would begin to give off a strong smell while being cooked.

The proof was positive that when this decomposition became noticeable scurvy soon followed a continuance of this diet. Please observe: nothing but salt, chloride of sodium, was used—no potassium nitrate whatever.

Furthermore, in the same paper I pointed out that the socalled "blackleg" that affected "lumberjacks" and railroad navvies living upon a diet of salted pork, principally, did not show itself until after the pork or bacon had become rancid, or rusted, and stunk when

being cooked.

In other words, then, scurvy is a ptomainepoisoning, more or less chronic, and is not caused by the small amounts of potassium salts present in pickled meats. I venture to say that the 12-pound ham Doctor Evans' patient consumed inside of ten days was "high" and unfit for food. The saltingprocess had but retarded decomposition, not prevented it.

A. S. THOMPSON.

Hawkesville. Canada.

MAGIC ACTION OF EMETINE IN AN INFANT BLEEDER

A little incident with emetine in the case of an infant bleeder may interest vou.

Recently I was called to attend a baby, born thirty bours before, for what appeared to be a large bruise, with indurated base, on the left shoulder, arm, and chest. There were also one or two blue spots like birdshot on the opposite arm. The birth had been normal. The child weighed ten pounds and seemed normal; cord was normal.

The next morning I received a note that the babe was bleeding to death from the navel. The cord had separated, and twice before my arrival a large pad of surgeons' cotton, five layers of canton flannel, the flannel skirt, dress and blanket had been saturated with the blood. A scratch from its own finger-nails on the left cheek and the right eyelid were bleeding—the cheek so freely that the dress, neck, and shoulder were covered with blood.

As soon as possible part of a granule of emetine was injected into the thigh. Instantly, as if by magic, the hemorrhage ceased. Then the mother was given one emetine granule every two hours until the babe was nauseated, then one granule three or four times a day. There has been no further trouble of any kind and baby is gaining in weight and general appearance rapidly.

Please tell me what further treatment you would advise to prevent this little one becoming a "bleeder." I am satisfied that an all-cornmeal diet (freshly home-ground) for the mother during six weeks before the child's birth was the direct cause of this trouble. This is the ninth child born alive to this mother in thirteen and a half years. Her sixth child died when forty-eight hours old, bleeding from every mucous membrane, and it was spotted from head to foot. In this case also poverty had been responsible for an exclusive home-raised corn diet. The mother then had been compelled, while in labor, to look after their only and pet horse which had just cut a vein in the neck on barbed wire. The other children are all living and fairly healthy. Parents were both born in Norway. O. E. W. SWAN.

Conant, Fla.

[It seems possible that there is an inherited tendency to hemophilia in this family. This "unit-character" is said to be transmissible. However, faulty diet may be a predisposing factor. Generous feeding, giving plenty of lime-carrying foods, is certainly desirable. We would also prescribe calcium lactate or chloride.—ED.]

CURRENT COMMENT BY A COUNTRY DOCTOR

Is It Also Cause of Ectopic Gestation?-An article in The Woman's Medical Journal for June, 1915, in which Dr. Bertha Van Hoosen discusses the psychological aspects of painless childbirth, is intensely interesting, but, unfortunately, seems of more value as academic reasoning upon the many-sided question of future race building than as an aid to prophylaxis of woman's present-day needless labor anguish. If, as the author of the article referred to, in common with many others, considers sexual intercourse for other than procreative purposes (or, rather, intercourse on the part of a pregnant woman) to be largely the causative factor in painful childbirth, then the error is mainly a racial one, individual fault being but secondary to it. However, carefully gathered statistics relating to births occurring when during her pregnancy the husband had been absent from the wife of undoubted fidelity (Europe at present, should furnish data of this kind), as also of those illegitimate births in which the "only once" at the behest of the despoiler was the cause of pregnancy, would be instructive. Comparison of the character and duration of childbirth among those living the ordinary married life of the western world with those limited sects teaching sexual abstinence during gestation and lactation, on the one, and, on the other, with harem women in Moslem countries, ought to yield valuable data.

It is to be feared, even were a complete and general education to be imparted upon the subject of sexual abstinence, that for the next few generations a tube of "H-M-C," a bottle of cbloroform, and a little vaseline for anointing the woman's lips will still be advisable emergency equipment for the humane accoucheur. Fortunately, however, sex-subjects are being treated, even by the laity, from a more scientific and rational standpoint, and exaggerated sexuality eventually will cease to be a factor in life.

Right now elimination of sexual intercourse for pleasure-innocent or otherwise-is far from realizable, and it is to be feared that in the present stage of human evolution most male advocates of the new teaching either are morally on a much higher plane than the average or are men in whom "senility (or unvirility) is mistaken for godliness." I say that it is fortunate that the time is coming when sex-science may be approached through general literature in a rational way and a writer may treat the subject with a candor at least approaching that of Holy Writ, if not that of Shakespeare, without being accused of being a ribald imitator of Dr. Francois Rabelais.

Under some definite natural law, not yet discovered by any Mendel or Schenck, early in intrauterine life about half the humans become females. Since it is being more and more realized that this latter half, selected under that mysterious law, should have an equal say in all matters affecting the common weal of the race, present and to come, woman herself doubtless will largely determine the details of her emancipation from useless childbed agony, as well as from other factors detrimental to the coming life ideal. This I believe, although not agreeing with those femininist enthusiasts who contend that one result of the war will be the placing of woman back to the position of superiority in the community held by her in the remote era of the matriarchate, or mother-gens.

No, sister! All this talk about your being divinely sentenced to reproduce the race in travail is based upon misunderstood Scripture, and I call it unscientific theological rot. Your curse is purely imaginary. Yes, and I'll go further. I'll take my syringe, my H-M-C, and a few other articles of merit, and

then proceed to prove it; as will thousands of other doctors. Then I'll let you have the ballot and vote, with me, for a fuller cooperation all around. But that is as far as I shall go in this direction. I'll be like the Arkansas legislature which, when petitioned that it change the name of that grand old sovereign commonwealth, from Arkansaw to Arkansas, declined to do so. There I draw the line, and refuse to admit the superiority of women.

In connection with this subject, it has occurred to me that the hyperemia induced by sexual intercourse during early pregnancy may be the frequent cause of ectopic gestation. This condition does not occur in the animals, or, at least not often, so far as known; and it may be that disturbance, through copulative excitation, of the delicate physiological function governing the descent of the fecundated ovum, not being the rule as in humans, is the reason. The explanation of the pathological condition (ectopia) here offered should be as plausible as any yet presented. Originality is not claimed for the idea; still, I have never seen it put forward.

The Senecio-Aureus Patient. - She had reached puberty, without full establishment of the functions of adult life. Various iron preparations had been prescribed, but, still, the patient remained chlorotic, even though some of these preparations contained arsenic. There was a greenish cast to her skin, the nails did not show true pink, the blood-count was deficient. Dysmenorrhea and amenorrhea alternated. The catamenial discharges often were intermenstrual and always wanting in color. The patient finally was withdrawn from the care of physicians and then took divers of those wonderful curealls advertised to be equally beneficial for "dawning womanhood" and for delayed menopause (vide testimonials run next to straight readingmatter in the daily and weekly Boilerplate). After a while, a physician again was summoned, on account of an acute attack of dysmenorrhea.

After learning of the previous watery discharges, intermenstrual in character, and because of her general chlorotic appearance, as well as the statement of the patient that she experienced frequent sensations as of "something heavy" in the pelvic region, senecoid was prescribed, in association with the immediately indicated remedies, namely, anemonin and viburnoid. This, after a careful examination, which revealed the typical symptoms of dysmenorrhea in an unusual degree, for this particular type of anemic patient.

The treatment was continued during two intermenstrual periods, and now that "greensickness" is gone. Iron, quinine and strychnine had been given previously, and was well indicated. The same combination, less the strychnine, (in this case contraindicated) was given in conjunction with the senecoid. This was quinine ferrocyanide. Senecio is one of those drugs which, although not containing an active principle strong enough to produce toxic symptoms, exerts a well-defined and positive specific influence over the symptom-groupings that it fits. Users of the active principles, Eclectics and Homeopathists all agree as to the efficacy of this remedy prescribed when its indications are present.

To assert that a drug is "inert" because it contains no active principle strong enough to exert toxic effect, hardly is logical. How can a plant reproduce itself in the age-old struggle for the survival of the fittest if it be inert and incapable of producing subtle chemic changes in the materials with which its environment has surrounded it? If capable of carrying out its own life-processes, dare I say that it is incapable of modifying physiological or pathological change in another organism? In our present outline knowledge of the cruder processes of physiological chemistry (crude as compared with the vast undemonstrated), have we the right to condemn empirically well-proven agents? And these thoughts bring up other thoughts concerning

the assaults upon echinacea.

Just before frost caused the representatives of the venomous crotalus to start their winter-hibernation, I attended a negro bitten by one of these rattlers. The fang marks were visible on the foot, there was great swelling of the leg, the nervous and circulatory symptoms of snakebite were characteristic: worst of all, "We didn't kill de snake, an' dat make hit wo'se, yes-sah." He was seen three hours after the bite, hence, too late to open the wound and apply potassium permanganate or to suck the wound. Echinacea was the first thought. The form in which the drug was available was echinacoid, the concentrate, and this was triturated with alcohol and glycerin and applied under oilsilk clear up to the knee. The instructions were, to leave the dressing on for four hours and then redress with the same preparation, after soaking the leg in hot magnesium-sulphate solution. Internally, strychnine valerate, capsicum, cactoid, and echinacoid were given. Whisky was prohibited, and the bottle containing the proscribed article was condemned to destruction.

That darkey got well—and, of course, I hear the medical nihilist say that he would have recovered, anyway. Perhaps so, the danger from the bite of our North American snakes being exaggerated. But if anyone will kindly convince me that echinacea angustifolia is inert, it will save the expense of renewing my supply. Echinacea remains the emergency-remedy in blood-dyscrasias and infective processes; not to the exclusion of biologic therapy, but, still, it remains, as before introduction of this invaluable therapeutic advance, the instant reliance of the observant doctor. This is not a "snake-story," but a clinical statement susceptible of proof.

If the use of these (by some) alleged inert remedies is continued by men acquainted with the therapy and the chemistry of the newer synthetics, as well as with biologic therapeutics, there certainly must be some

good ground for it. Kerosene.—Relative to the very interesting article by Dr. Rigney and the editorial comment upon it in September CLINICAL MEDI-CINE, I frankly confess to more knowledge of the chemical possibilities of kerosene than of its therapeutic uses. Petrolatum and liquid paraffin I use extensively, but plain coal-oil has received at my hands probably unmerited neglect. I remember having been informed by a fellow practitioner, some years ago, that kerosene constitutes a splendid injection for gonorrhea, safe and efficacious, only the lack of color and its bad odor being objections to it. I then suggested coloring it with alkanet and disguising the odor with some other strong-smelling oil. The thought of giving it a trial was dismissed on thinking of the complex hydrocarbon group, with marshgas and incidental sulphur compounds to be dealt with in a commercial product derived from various sources, with only its illuminating power and explosive possibilities regulated. However, a product of uniform illuminating power and meeting explosive restrictions, such as modern coal-oil, should be fairly free from danger and has possibilities worthy of investigation as a whole as well as in the form of pharmaceutical separation.

In the use of the commercial kerosene except as a local application (that is, for enemas), doubtless immediate elimination from the body should be looked to. For high enemas, probably liquid parafin would have served the doctor as well. The efficient carrying-out of high-enema technic, including position of patient, massage, and his resource efficiency in improvising a long colon-tube with which to use his bulk lubricant may have

been the cause of Doctor Rigney's success. Resource and efficiency: this is admitted while we eliminate discussion of the complex methane-product. Liquid paraffin can be used both ways in the alimentary product, without there being danger of absorption or of bad effects from some uncertain hydrocarbon. Therefore, when at hand, liquid paraffin can be used with safety, and it is as easy to carry in a buggy as the kerosene.

Cases of poisonous effect from the internal use of coal-oil are on record; and quite a serious one, from the free domestic administration to a child, recently came under my treatment.

Federal Licensure.—Let any physician of a dozen or more years' practice take the next set of state-board questions coming to his hand. Use the typewriter, pencil or pen and go at it, allowing no "self-cheating." Just call on the latent power of the memory and go to it bravely. Then mark the papers, with resort to textbooks, as if they were those of someone else. How many among us will make the required percentage? That is, unless for some reason two or three branches have been either specialties or hobbies of his. Try it, doctor—and then do not be surprised at the number of those "A" and "plus A" lads that "fell down." It will hurt no elderly physician to examine himself seriously, but it will help in two ways. The number of things that result in individual professional weakness will be discovered, as also the difficulty of passing a board examination when exigencies of existence require removal over the state-boundary lines.

It is safe to say that the practitioner of a dozen or more years' experience will have a pretty hard proposition, unless for some reason he has kept up on the technical branches. If a state requiring reexamination gives a few points of credit for years of practice they sure are likely to be needed—some mighty capable men have difficulty in remembering the rigamarole by which they placed even the carpal and metacarpal bones.

Federal licensing doubtless is coming—and should come. However, it should be a fair proposition to give older men an even break. It seems certain that a federal board, or any other board, could, by oral examination alone, discover a man's thorough fitness to continue the practice of medicine if he should desire to move.

It is quite true that doubtless there are a limited number of men who have received state licenses under former lax requirements, but who are not up in their profession and have allowed themselves to become fossils or worse. On the other hand, there are many men who received good grounding—all that any school can ever give—under the careful instruction and personal supervision of the teachers of the older and smaller schools (many of them now defunct). These men have builded well on their foundation and are strictly modern, first-class physicians, even if some of them would have to study up pretty hard before they could pass an examination on modern chemistry and upon bacteriological details.

Alabama has, as yet, no reciprocity provision, but I believe that any old practitioner who has gone against its state board will agree with me that when he did he had the hardest few days' work he ever attempted and that the certificate ought to settle the matter of capability anywhere: this even if he did make a creditable percent. He will also be convinced that the certificate of a modern state board should be good wherever the flag flies, also wherever international professional courtesy prevails.

A. L. Nourse.

Sawyerville, Ala.

EMETINE IN SOME CASES OF TUBER-CULOSIS

Case 1. I began treatment for tuberculosis about a year ago. The man had been sick about two years and, as we all thought, was on his last lap of the journey of life. I began giving him supportive treatment—codliver-oil, with hypophosphites, nuclein, and the like. He improved somewhat and began to increase in weight, so, I concluded to begin very carefully with the tuberculintreatment, in conjunction with the foregoing. For a while he continued to gain in weight and strength, so that he was able to ride alone in his automobile and to walk a considerable distance every day.

During all this time, I had the greatest trouble with his stomach and bowels. His cough was better, the right lung began to heal, but the stomach and bowels continued bad—either being constipated or too loose. To be sure, I had given him everything I could think of to promote elimination, using the mild chloride of mercury and saline laxative, the intestinal antiseptics and digestives, but seemingly could not make any progress. Finally, I stopped the tuberculin, in the hope that he would gain strength;

but the kidneys, stomach and bowels continued to trouble him, indeed, grew worse.

Then I began giving emetine hydrochloride, 1 grain every day, stopping all other treatment, except for an occasional small dose of cascara. In a few days, he began to improve. I continued the emetine for about three weeks, once a day, and for four weeks every other day; and now, after four weeks that he has taken nothing but good nourishing food, he is steadily improving, with only about one-half of a lung to breath with. He will not recover, but he will live at least a year longer—barring accidents. I am convinced that emetine hydrochloride will take care of all tuberculous conditions that relate to the intestinal tract.

Case 2. Woman. Strong tuberculous reaction with the Moro test, also specimens of fecal matter show tubercle-bacilli. Bowels continually constipated and about once every two weeks there are quantities of pus and blood in the fecal discharges. Catarrh of the nasal tract, with very offensive odor.

Treatment: Catarrhal vaccine (combined), every fourth day; emetine hydrochloride, 1-2 grain. After two weeks' treatment, she is better in every way; tongue clean, appetite good, no tubercle-bacilli in fecal matter. She is taking nuclein, 15 drops of the solution three times a day, under the tongue; also codliver-oil with hypophosphites. She takes a pint of cream and three or four eggs a day, and is doing finely, although two weeks ago she hardly ate enough to sustain life.

Emetine is taking care of the intestinal tract, enabling her to take plenty of food, which is the prime factor in the treatment of tuberculosis. I shall probably give tuberculin when she gets strong enough. This woman will get well.

T. M. STEWART.

Canistota, S. D.

TWO OBSTETRICAL ANOMALIES: RE-TAINED AMNIUM AND RETAINED LOCHIA

The following two experiences may interest some of the readers of CLINICAL MEDICINE:

1. A woman, half-breed, 21 years of age, primipara, gave birth to a boy at 4:10 o'clock in the morning, no doctor being in attendance. In the evening I was called, because the "rest" had not come as yet, and reached the patient's home at 8 o'clock. The woman was lying on the floor; she was looking well, but was in pain.

The first thing I discovered was, that her abdomen was still as big as though she had not yet given birth to the child. Was this a case of internal hemorrhage? was my first thought; but the face and pulse indicated that it was not. The next suggestion was, that it was a case of twin pregnancy. However, palpation and auscultation convinced me to the contrary. Also, the patient had passed a sufficient quantity of urine, both before delivery and afterward, which satisfied me that the protuberance was not due to retention of urine. What, then, was it? A careful vaginal examination disclosed that the placenta had passed out of the uterus and was lying in the vagina. Gentle expression brought it out complete. And, still, the abdominal enlargement persisted.

The patient had already been ordered to bed, and I now introduced a uterine dilator into the os. Slight dilatation was followed by the flow of a large quantity of amniotic fluid. The "tumor" vanished, the pains disappeared, and the patient immediately felt relieved. This was two years ago. The other day I saw the woman in my office, and she complained about not having become

pregnant again.

2. A woman, in labor, age 20, primipara, who since her first menstruation at 16 had suffered from acute pains at every period. The os was very slow in dilating; however, the child was born normally, although the placenta was adherent and a ring formed in the middle of the uterus. The uterine flow was normal the first day, but on the second day the quantity became very small and on the third the discharge disappeared entirely. That night there was a slight rise of temperature. I tried uterine douching, but in order to introduce the fluid dilatation was necessary. A large quantity of offensive discharge followed, resulting in an almost immediate fall of temperature to normal. However, the next afternoon the discharge ceased again, and there was none at all for the two succeeding days, this being followed again by a rise of temperature up to 101° F.

Fearing the possibility that shreds or fragments of the placenta had been retained, I decided to curet, but again found the os uteri tightly contracted. Forcible dilatation was followed by a discharge, as before, but

the uterus proved clean.

The temperature again fell to normal, to my great satisfaction. In order to prevent reaccumulation of the fluid, I left a rubber drainage tube in the uterus, but the flow did not increase, so that twice a day the os had to be dilated in order to permit of irrigating the womb, until finally the discharge ceased.

I tried several remedies calculated to relax the contracted os, but apparently without avail. Was there anything else I could have done, in view of the fact that the condition was not discovered previous to pregnancy?

EMILE BOISSONNEAULT.

Grouard, Alberta, Canada.

[From the Doctor's history, it seems probable that in the first case mentioned there was a very precipitate labor, the fetal head being forced into the os so quickly as to block it completely and thus prevent the escape of the amniotic fluid. After the birth of the child, there must have occurred an immediate blocking of the uterine outlet by the placental membranes, followed by contraction at the cervical ring, thus preventing the escape of the fluid. Perhaps someone can suggest a better explanation; if so, he is invited to favor the "family."

Case 2 seems to be one of hourglass contraction, in which, happily, the placenta was delivered without postpartum hemorrhage setting in. From the Doctor's history of the case, it seems probable that there existed an obstruction-ring prior to pregnancy; this ring, moreover, being responsible for the painful menstruation of which the young

woman complained.

We shall be very glad if any reader of CLINICAL MEDICINE will comment upon these cases and suggest an improvement of the Doctor's technic.—ED.]

CYSTS OF THE TONGUE IN THE NEW-BORN

Cysts of the tongue in the newborn are not of common occurrence. Occasionally we do encounter in the literature reports of such cases, but in most of these instances there exists considerable doubt as to the exact nature of the condition. The writer has met with two definite cases of cysts of the tongue in the newborn, and in both the type of cyst proved to be the same.

Case 1. The babe weighed 9 1-2 pounds and, apparently, was sound. The cyst on the tongue was not noticed until an effort was made to cleanse the child's mouth. Then a hard and nodular mass was felt, about the size of a hazel-nut. Upon closer examination, it was found that there were two small masses instead of a single large one, and both opening through a common channel.

The masses were plainly seen on the anterior surface of the tongue, just beyond the tip.

Case 2. This was an 8-pound baby, robust and sound, but its difficulty in breathing gave immediate suspicion that something was wrong. Examination of the mouth showed a condition commonly known as ranula. The writer having witnessed a similar condition only a short time before, quickly performed the simple operation necessary, aspirated and drained the cyst, and thus afforded the infant immediate relief.

The first case did not prove so serious or urgent; in fact, nothing of a surgical nature was necessary, until the mother found that the baby was unable to take the breast. The second case undoubtedly also would have had

trouble in nursing.

Case No. 1 was attended to by the hospital staff-surgeon, who pronounced the condition a retention-cyst. It is interesting to note that, while all the material was drained out at the first operation, it was necessary to repuncture the sac, since it readily filled up again and so caused the same obstruction as before. However, after the baby was about ten days old the whole condition disappeared.

Case No. 2 was entirely under my own observation. In this case, the cyst was found to extend to the posterior surface of the tongue and slightly adherent to the base of the mouth. The procedure of relieving the condition was the same as described in

Case No. 1.

The writer subsequently has taken the trouble to review the literature on this subject, but has discovered, to his great dissatisfaction, that there is little, if anything, in particular said on this subject. Ranula is quite exhaustively discussed, but there are only a few cases which appear to be in any way similar to the one described here. The literature tells us that, as a general statement, it may be taken that retentioncysts of the mucous glands may occur in any part of the mucous coat of the alimentary tract. Some reports cite instances in which small cysts embedded in the muscle of the tongue have occasionally been found.

These cysts are the result of some obstruction of the ducts of the salivary glands, which, owing to the obstruction, become cystically dilated. If the tumor presents itself in the floor of the mouth, beneath the tongue, it is given the name of ranula, while, if it takes its position on the anterior surface of the tongue and without pressing in any way on the floor, it is usually of the retention-

type of cysts. Not infrequently dermoids and other varieties of cysts are mistaken for retention-cysts of the tongue, but these two must be carefully differentiated.

ABRAHAM R. HOLLANDER.

Chicago, Ill.

STRAIGHTENING OUT ANOTHER HAR-RISON-LAW TANGLE

We have been informed that the United States Commissioner of Internal Revenue has ruled that the practice of renewing narcotic prescriptions by indicating thereon the druggist's serial number will no longer be permitted, such a practice being inconsistent with the ruling given in Treasury Decision 2213. It is stated that this practice was never allowed by the Department for the renewal of prescriptions for narcotic drugs alone, but it was permitted for a time in some instances, when physicians had forgotten the exact proportion of ingredients of a preparation or remedy containing narcotic drugs and desired to renew the prescription therefor.

It is well to remember that at all times the name and address of the patient, the date, the name of the ingredients and the respective quantities, the full name and address of the physician as well as his registry number, must appear on each and every prescription calling for narcotic drugs, preparations or remedies coming within the scope of the

Harrison Narcotic Act.

STATE BOARD EXAMINATION QUESTIONS

We are constantly receiving letters from physicians who wish us to publish some of the state board questions used in the various states in the examinations for medical licensure, together with answers, and comments on the licensing laws, reciprocity, and the like. Accordingly, we have decided to give a small amount of space to this subject—for a few months at least. Whether this feature will be continued or not will depend upon how our readers like it. Please let us know if you approve or if you think it a waste of space. CLINICAL MEDICINE tries to do the greatest good to the greatest number of its readers.

The questions given this month were those used at the California examination of June 17 1915. Only half the topics are covered this month. The balance will be printed in February, together with answers to the questions printed in this issue.

tions printed in this issue.

ANATOMY AND HISTOLOGY

- 1. Give formation and branches of the lumbar and sacral plexuses. (May use dia-
- 2. (a) Classify articulations; give a typical example of each class.
 - (b) Discuss the hip joint, naming all muscles passing across the joint.
- 3. Discuss the distribution and central connections of the auditory (8th cranial) nerve.
- Discuss the bony thorax.
- Discuss the pleura, giving attachments and reflections, also external markings of its boundaries.
- (a) Give the action of the sterno-cliedo mastoid; singly and together.
 - Give the action of the psoas magnus. (c) Serratus anterier. (Give action of)
 - (d) Deltoid. (Give action of)
 - (Give action of) Trapezius. Ilio-costalis. (Give action of) Latissimus dorsi. (Give action of)
- (a) Describe by diagram, the longitudinal section of the femur, showing outline and histological structure, showing normal development and regeneration.
- Give the essential differences of the appearance and structure—gross and micro-scopic— of the mucous membrane of the duodenum, jejunum and ileum.
- 9. Give the histology of a medium size artery. Give formation of the tributaries of the
- portal vein; give most inferior tribu-11. Discuss the cervical sympathetic ganglia;
- tributaries, and give location, branches.
- 12. Give histology of the mammary gland; make drawing showing typical histological section.

Answer ten questions only.

PHYSIOLOGY

- (a) Discuss hæmolysis.
 - (b) Discuss the origin and fate of the leucocytes.
- What is the relation of the nerves to the movements of the intestines?
- Discuss the influence of the nervous system 3. upon respiration.
- Define the following terms: Inhibition, dif-
- fusion, osmosis, diapedesis, perimetry.
 Discuss the metabolism of the embryo.
- Discuss color blindness.
- Discuss inhibition in reflex action.
- Discuss the relation of the rods and cones to vision. Discuss the variations in the volume of the
- brain due to respiration. 10. Discuss the sensation of hunger and thirst.
- What are the sources of uric acid? b) Where and how is uric acid formed?
- What effects are observed after section of a cutaneous nerve? Answer ten questions only.

CHEMISTRY AND TOXICOLOGY

- 1. Name and give the formulæ for five salts of mercury
- What is the formula of hydrogen peroxide? What is its action upon silver oxide; upon finely divided platinum?

- What is "bleaching powder"; its formula? How does it act as a disinfectant?
- Define and discuss diffusion and osmosis. Describe and discuss briefly HNO; its chemical and physical properties.
- Discuss arsenic (its occurrence, properties, toxic effects) and describe the use of one antidote.
- Discuss lead poisoning and two effective means of overcoming the same.
- Define "physiological antidote" and "chemical antidote" and give an example of each
- Discuss hydrargyrism.
- Discuss the indications and contraindications for the use of stomach pump.
- Discuss carbolic acid poisoning and an effi-11. cient method of treatment.
- Discuss the toxic effects of yellow phosphorus.

Answer ten questions only.

BACTERIOLOGY AND PATHOLOGY

- What changes are found in a stained blood smear in primary pernicious anemia?
- What elements might you find microscopically in the sediment of a normal urine?
- Describe the microscopic field seen in: (a) a negative Widal reaction; (b) a positive Widal reaction.
- What do you look for in a microscopic examination of stomach contents
- Define eosinophilia; name several conditions. What are casts? Describe at least three
- varieties and tell under what diseased conditions they are found. Discuss briefly the etiology of chronic inter-
- stitial hepatitis, or cirrhosis of the liver, and describe the microscopic appearance of at least two varieties.
- Describe embolism, infarction and thrombosis and briefly discuss the pathology of each.
- (a) carcinoma; (b) sarcoma. Give Define: the relative frequency of occurrence in (a) breast; (b) liver; (c) bone.
- 10. Describe the gross appearance of a bone at the site of osteomyelitis.
- What are the causes of jaundice and how do 11. they operate to produce this condition?
 - Define: (a) cloudy swelling; (b) atrophy; (c) malignancy. Answer ten questions only.

MATERIA MEDICA AND THERAPEUTICS, PHARMACOLOGY, INCLUDING PRE-SCRIPTION WRITING

- Name four commonly used mercury com-pounds (U. S. P.) and discuss briefly their therapeutic uses.
- Discuss fully the possible therapeutic effects that would be expected of the following prescription:
 - Rx Tinct. nucis vomicæ..... 5,0 Fluid extracti cascaræ..... 10,0
 - Tinct. cardamon comp.... 25,0
- Tinct. gentian comp. q.s.ad.100,0 M.Sig. Take one teaspoonful in half glass of water t.i.d., before meals. What is apomorphine? State dosage, indi-
- cations, modes of administration and action.

4. Discuss the indications and contraindications for the use of the following:

 Describe and discuss three different modes of administering drugs for therapeutic purposes.

 Discuss the conditions that modify the effects of drugs.

 (a) Discuss the dosage of drugs as influenced by age, sex, size and weight of the individual.
 (b) Define idiosyncrasy and discuss one

example.

 (a) Discuss oleum ricini, its dosage, therepeutic action and indications.

(b) Discuss three contraindications for the use of intestinal evacuants.

9. Discuss the systemic action of alcohol (internally administered).
 10. What is adrenalin? How is it administered?

What are its principal effects?

11. Discuss salvarsan (its principal properties, dosage, best mode of administration,

dosage, best mode of administration, indications and contraindications).

12. Describe the bromide salt most commonly

 Describe the bromide salt most commonly used (as to its physical properties, dosage, therapeutic action and untoward effects).
 Answer ten questions only.

KEROSENE ENEMAS, AND THE RECTAL TUBE

It is now some twenty years since I inserted the full-length of a 2-foot soft-rubber rectal tube, to dislodge an obstruction at the ileocecal valve. About 2 quarts of kerosene was injected, and the difficulty was soon removed. I have repeated this in the case of other patients since then.

To succeed in this operation, it is necessary to keep the tube and bowels constantly inflated with warm water while inserting the same. The tube must be of good soft rubber, with thick walls, and at least 1-2 inch in diameter. A soft, over-flexible tube will double upon itself when making the turns in the large bowel.

V. E. LAWRENCE.

Ottawa, Kans.

AMEBIC DYSENTERY TREATED WITH EMETINE

An interesting case of amebic dysentery was recently referred to me by a brother physician. The patient was a woman, and when I first saw her, on September 24, she had been ill for four weeks. She had a very weak pulse, averaging 120; the temperature ranged from 101° to 103° F. She was pass-

ing at that time from twelve to fifteen stools in twenty-four hours, the discharges containing much blood. Although I do not have a complete laboratory at my disposal, I nevertheless was able, with my microscope, to detect the ameba in the fecal matter; thereby proving the correctness of the diagnosis made by the other physician, Doctor Hubbard, of Indiana. Almost everything was tried that might be useful in amebic dysentery, but with poor results. We then decided to give emetine a trial. We began with three 1-2 grain ampules in the twenty-four hours. This treatment was continued for twelve days. By this time, the number of stools was reduced to four daily. Thereafter the patient was given one 1-2-grain ampule of emetine daily for fifteen days.

In this case, the emetine certainly did the work. However, other treatment was employed, which undoubtedly contributed to

this woman's cure.

R. E. LEE.

Oxford, Ind.

THE TREATMENT OF SUPPURATIVE OTITIS MEDIA

The failures recorded in the treatment of suppurative otitis media are so familiar to the aurist that comment is unnecessary. Following along lines indicated by the best authorities, I have had a modicum of success, but it is to the failures that I will direct my attention. After all that has been said on the subject, I have chosen to place before my confrères the result of my recent work in effecting cures in those cases which usually baffle our best efforts. A brief summary of the few cases I have selected at random will, I think, bring to mind conditions with which we are familiar.

In the clinics of hospitals and in private practice, I have looked with despair upon such cases, and because of my utter help-lessness I determined to find some measure that would at least inspire hope.

In the course of my patient work in this direction, I have evolved an antiseptic solution that has given me most gratifying results, and I take pleasure in submitting herewith the formula of the same, as follows:

Acetanilidgrs. 32
Resorcin dr. 1
Boric aciddrs. 2, grs. 24
Formalin
Alcoholozs. 2, drs. 3
Water, enough to makeozs, 16

Ten months ago, a colleague referred to me, for an opinion, a case of chronic suppurative

otitis media. The patient, a young woman, age 19, in perfect health, complained of a discharging ear since her early childhood. On June 8, 1914, a radical operation upon the mastoid bone had been performed, and on September 28, of the same year, she was again operated upon for the removal of necrosed bone. The operations evidently had been done with perfect skill, but the ear continued to suppurate.

In giving my opinion, I suggested the use of an autogenous vaccine, which advice was followed; and a series of fifteen injections, at regular intervals, were given. However, no improvement followed. During that period, I wish to mention, proper local treatment was not overlooked. Thinking that, possibly, the vaccine was at fault, I had another vaccine made; still, after repeated injections of this, the condition remained unchanged. It was at this period that I began treatment with the solution described, with the result

that in four weeks the cure was complete. My success in this case was such a revelation to me that it inspired me with the greatest confidence.

The following cases, I think, are just as interesting, and I will report them briefly:

Mrs. M. R., age 21, had a discharging ear since childhood. Radical mastoid operation was performed in November of 1913, without relief. Vaccines and local treatment availed little. July 16, 1915, treatment with the above solution was instituted. On July 27, her ear was absolutely dry. Discharged cured, and cure holds good at this writing.

L. V. C., age 15, had a suppurating ear for ten years. Was treated by several specialists. December 22, 1913, radical mastoid operation was performed. Six months later, curettement of eustachian tube was done. The suppuration continued. Then fifteen injections of an antogenous vaccine were given. No results. July 29, 1915, I began treatment with the solution, and by August 13, 1915, the ear was dry. The patient stated that this was the first time his ear had been dry. This case is still under observation.

Mr. A. W., age 38 years, had discharging ear since 1895. Consulted a specialist in the city in 1912, who did a radical mastoid operation. The patient remained for treatment and was discharged as cured at the end of two months. The ear continued dry for about eight months, then began to discharge again. In 1913, the patient returned for treatment, remained only a short while, and left without benefit. In 1914, he again returned, and was treated without benefit. In

July, 1915, he again returned, and this time was treated with the solution. After two weeks' treatment the ear was dry. At this writing, the patient's ear still is free from secretion.

D. L., age 12 years, had a suppurating ear since he was one month old. July, 1914, he had a radical mastoid operation. The ear continued to suppurate. Vaccines and local treatment were of no avail. He left for home, but returned in July, 1915, for further treatment. July 20, 1915, I began treatment with the solution, and after three applications signs of improvement showed. At this writing the ear is practically free from secretion.

Mr. R. A. J., age 26 years, had chronic suppurative otitis media for the past three years. The discharge ceased after the second treatment, and the ear remains dry now one

month after that.

A. W., age 4 years. The mother said that something burst in the ear on Saturday night, and they came for treatment on Monday morning, the ear discharging. The solution was used, and the cure was complete after the second application.

N. C., age 2 years. July 12, 1915, had double tympanotomy. July 13, 1915, there was mastoid tenderness. The usual treatments gave no relief. July 17, 1915, all other treatment was discontinued and the solution was used for the first time. July 20, 1915, the ear was free from secretion.

N. S., age 12 years, had a discharging ear of three weeks' duration. Had no pain at any time. July 28, 1915, the solution was applied. The discharge ceased after the second application, and has not returned.

My method of treatment is as follows: The ear should be gently and thoroughly mopped out, then, after all evidence of secretion has been removed, introduce a tampon, saturated with the solution, as far down in the fundus as possible, using very little force. If the secretion is profuse, this procedure should be repeated daily. As the discharge lessens, the treatment should be given on alternate days or longer periods, at the discretion of the doctor.

A few pertinent observations may not be out of place. The surgeon must exercise great care in removing any exciting cause located in the nose or nasopharynx; the presence of necrotic bone must be determined and special directions given as to the general health of the patient.

In acute conditions, where mastoid involvement is suspected, I would advise repeated instillations, rather than tampons, during this stage.

What has appealed to me most strongly is, the results obtained in those cases where the radical operation upon the mastoid bone has been performed in suppurative otitis.

New Orleans, La.

JOHN S. DUNN.

CLINICAL NOTES FROM IDAHO. TY-PHOID FEVER AND THE CONTAGIOUS DISEASES

These are jottings of clinical experience in the early fall and winter in the beautiful climate of Idaho, at an altitude of over a mile. This season has been extremely dry, no rain falling for three months, and the dust has been very objectionable. Whether the dusty summer will predispose to greater prevalence of throat and lung diseases is pure conjecture at this time, for the weather, while frosty at night, is warm and bright during the day. There have been few cases of "summer complaint," although the flies have been bad, and no cases of typhoid fever.

Last fall, there was a good deal of wet and stormy weather and an increase of rheumatic and bronchial troubles. And only one case of typhoid-fever. This was in a girl of fourteen who had been too ill to go to school, but was up and around for ten days before receiving medical attention. Two days later, the hemorrhage occurred. Ice and absolute rest for twenty-four hours, with a hypodermic of emetine hydrochloride, 1-2 grain, repeated in twelve hours, was all that was necessary to control this. The patient was free of fever in twelve days, but convalesced rather slowly. Intestinal antiseptics (the sulphocarbolates) were, of course, given throughout the attack in 5- to 10-grain doses every two hours, to reduce fetor of the stools and

control tympany.

There have been few other cases of communicable diseases, and these were so mild as to need little treatment. Measles, pertussis, and smallpox rarely receive medical treatment. During the winter, there was little pneumonia, but the wet months of April and May brought more than their share. The sthenic cases are treated with the defervescent granule, given frequently until defervescence, with thorough elimination, is secured. In the early stages of the disease no food is allowed, but water is ordered in quantity. Calomel is given in divided doses followed by saline laxative, and, in a few hours, by a large dose (three or four tablespoonfuls) of castor-oil. I have seen cases that were showing very grave symptoms-temperature 104, pulse, 120, severe pain in the right chest, with constant hacking cough, rusty sputum, restlessness-so improved by thorough elimination as to make one question the diagnosis.

Then there are cases that do not improve even with the most thorough elimination, demanding constant energetic attention to

bring them through the crisis.

I believe in fresh air, but there is no necessity for freezing the patient. I believe in rest, but not to the detriment of the patient. Do not disturb so frequently as to interfere with rest, especially at night. Toxemia kills eliminate even in the seemingly moribund. Do not overstimulate—but stimulate without fear when stimulation is demanded. If digestion is poor, if tympany develops, if fetor of the stool is present, restrict diet, eliminate, give intestinal antiseptics freely.

Since the great development of the field of action of emetine, and its specific influence in amebic disorders, this alkaloid has become the best-known of all our plant-remedies, and its use is being advocated in disorders that at first sight seem hardly related. Deep consideration of the fact of focal infections, arising anywhere in the body, and their often puzzling obscurity, has drawn attention to their possible cause in mouth and throat diseases; and in these cases it has been found that injections of emetine hydrochloride are beneficial and, in time, curative.

One inevitably, nowadays, in discussing pyorrhea alveolaris, thinks of emetine and its wonderful specific action in controlling this disease. I have seen this specificity in several bad cases of late, and it is really remarkable what excellent results are obtained. In cases of pyorrhea, it is absolutely necessary to have the earnest cooperation of a good dentist, and he must eradicate the local disease first, before any treatment will be successful.

I have used emetine in hemorrhages and find it almost specific here. In metrorrhagia, menorrhagia, pulmonary hemorrhage, intestinal hemorrhage, epistaxis, it has been of evident benefit.

I am using it in a case of psoriasis in a boy of twelve, affecting the arms and legs, and some improvement is already noticed. In a case of gall-bladder trouble, doubtless due to mouth infection, and in another owing to chronic tonsillitis, a few hypodermic injections of emetine, in conjunction with local treatment, have, seemingly, put an end to the attacks.

I cannot get away from the necessity of reiterating the importance of elimination. It seems strange that all the literature on this subject has produced so little real impression upon the rank and file, and we still, and all too often, meet with cases where this essential in all treatment has been wofully neglected. To give a few tablets of calomel, followed by a saline laxative, is routine treatment with a great many, and these think that elimination has been attained. Their other treatment is all right, but results are not as expected, and remedies are blamed, when the blame should be placed upon the lack of thorough elimination. Here one often sees remarkable results follow a large dose of, say, castor-oil.

I am partial to castor-oil. I think it is the remedy in many diseases of childhood, and in those of adults also. It is an old remedy, some three thousands of years old, and, so, if age counts, it ought to be beneficial. Its

cleansing effect is wonderful.

All this, because of a case lately treated. Elimination was demanded, in view of the foul breath and the coated tongue, the fetor of the stools, the inappetence and poor digestion, and, yet, all kinds of remedies had been given to alleviate the distress of the patient, without attending to the prominent symptoms present, and all these calling for—yes, 4 tablespoonfuls of castor-oil or else a sufficient quantity of a saline laxative.

After elimination, the purified cells of the body will be able to select the right remedy, to correct the deviation from health.

In this connection, I would call attention to the beautiful results obtained from the use of bilein compounds, such as calomel, podophyllin, and bilein compound preliminary to the routine use of your chosen laxative.

Two brothers and their sister have died from "leakage of the heart." The last member of the family, a man of fourty-four, has developed endocarditis, with involvment of the mitral valves. Rest and elimination, with macrotys and cactus, and attention to the digestion, constitute the treatment.

I have under treatment for typhoid-fever, a little patient, a sister of my one case last fall. Following a suggestion in *Clinical Medicine*, I am trying emetine hypodermically, and shall report results.

R. J. SMITH,

Bancroft, Idaho.

FREEMAN'S PELLAGRA CASE: A CORRECTION

I have a correction to make concerning the case of pellagra reported by me last month. At that time, I stated that I had not seen

the patient for three weeks, but that the neighbors told me the child was doing well, that its skin was clearing up, and everything was improving.

Some two weeks later, the mother again brought the child (3 years old) to me, giving as an excuse for the long absence that she had been away from home. The child's condition was worse again. The lower part of its face was quite clear, but the upper faceespecially the forehead and back of the earsthe arms, hands, knees, and feet were much worse; and the child was more stupid, as if its brain were affected. I now gave echinacea, calcium sulphide, galactenzyme, nuclein, and other tonics, as seemed needed, but there was no real improvement. The people are very poor and negligent, the medicines (as I discovered) were not given half the time, suitable food could not be obtained, and November 20 the child died. Neighbors say the child was born out of wedlock, which, perhaps, accounts for the neglect.

However, the statement concerning the improvement after the new treatment with iodine and resorcin, as I reported, is testified to by those who saw the sick child at that time.

C. A. FREEMAN.

Geary, Okla.

THE SHORTAGE OF DRUGS

We have received from Dr. L. F. Schmauss, of Alexandria, Indiana, a copy of some resolutions, concerning the present shortage in various drugs, adopted at the annual meeting of the Indiana Eighth District Medical Society, held in Muncie, Indiana, October 21, 1915. Dr. Fred McK. Ruby is president of the Society and Dr. H. D. Fair is the secretary. It is just as Doctor Schmauss states in this letter, relative to this drug shortage:

"Since there is no excuse, no justification for the prevailing interference with our legitimate trade or commerce, with the importation of drugs and chemicals, prompt action should be urged upon and taken by every medical society or association of the United States. This is not a matter of partisanship nor a matter of pro-Ally or pro-German, but a matter of pure business and of exerting our rights and of performing our duty as the party or profession directly concerned."

The resolutions are as follows:

"Whereas, owing to the present condition, there is an inability to import drugs and chemicals necessary in the treatment of the sick and injured, by reason of which the price has so advanced that in many instances it becomes prohibitive and in others absolutely

impossible to obtain them, and

"Whereas, this condition imposes a great hardship upon physicians and patients and in many instances endangers the life and health of the people,

"Therefore, we exceedingly deplore this condition and pray that you will use your best efforts speedily to relieve the same.

The Committee: Dr. L. F. Schmauss, Dr. I. N. Trent, Dr. G. Reynard."

SORE-THROAT SUGGESTIONS

All sore throats are caused by microorganisms except those due to trauma, and these at once become infected by the same parasites.

Any form of sore throat opens the door to the invasion of diphtheria; and no man may tell when these germs are not present, in

carrier or house.

Make it a rule that every sore throat must be treated from the standpoint of preventing

the supervention of diphtheria.

Fortunately an effective preventive of diphtheria is also a quick, sure and harmless cure for any sore throat. Here it is: Potassium chlorate pulv., grs. 30; acid hydrochloric, strong, dram 1. Mix in a 4-ounce vial and add at once water to fill; cork tightly. Dose, a teaspoonful, undiluted, every one to four hours. Give water just before each dose. As long as the green color shows free chlorine it is active; when this fades, throw away and renew.

In cases needing astringency and in early diphtheria add two drams tr. ferri chloridi to the 4-ounce mixture just described. Same dose, same method of dosing. While this is a disagreeable dose, it so quickly relieves the burning that a little child will beg for

more doses

The angina of scarlatina responds promptly to applications of salicylic acid solution, until true diphtheria complicates; when it is useless.

All forms are bettered by relieving from fecal toxemia, which renders the best local treatment nugatory in chronic forms.

Begin by clearing the bowels and draining the water off; calomel and podophyllotoxin for six doses; then a saline laxative; and meanwhile your local applications.

Our fathers believed (a) that calome' acted on the liver; (b) that it did the patient good. In the vast majority of cases the latter belief was correct. You may argue the first. Aconitine dissipates an acute pharyngitis by opening the blood vessels and letting the blood flow out and decongest the affected tract.

Atropine dissipates an acute catarrh by dilating the capillaries generally and pulling the blood out of the engorged area.

Pilocarpine dissipates an acute mucous engorgement by draining the blood of water so that the congesting fluids run out into the vessels.

All stimulants of excretions act like pilocarpine, but few if any so thoroughly and so quickly; still, hydragogs are effective.

Potassium bichromate in very small, frequent doses has a singular soothing effect on an inflamed throat; let the granule dissolve on the tongue.

Calcidin in small doses every fifteen minutes, in a spoonful of very hot water, usually dissipates an acute sore throat if taken

early enough.

A cold wet compress to the neck is believed by many to be quite effective and may be applied to any acute form of sore throat; ice in diphtheria.

The slightest sign of coryza in diphtheria is ominous; begin syringing the nostrils with silver nitrate at once; changing to chromic

acid if epistaxis occurs.

In chronic forms, with red thickenings of mucosa, paint daily with iodine, keep bowels clear, and give potassium bichromate or calcidin regularly.

Many remedies abort a forming tonsillitis if given early enough.—salicylates, quinsy balls, guaiac, chlorine, quinine, pilocarpine,

purges.

Calx sulphurata (calcium sulphide) is probably the most effective of all—give a centigram every fifteen minutes till the skin smells like—???

Nuclein solution 's a curious remedy here; amazingly effective if taken early and in

full doses of full strength.

The irritative cough is relieved by allowing granules of codeine, 1-6 grain each, to dissolve on the tongue, meanwhile restraining cough by will.

In influenzal forms forget your dosage and give enough calcidin to do the work; it will do it; give 5 to 10 or 20 grains often.

Just to be up to date, I suggest that in all sore throats you amputate the affected parts

as quickly as possible.

Chronic forms require chronic treatment; and here is where helenin, the tonic action of berberine, and especially persistent care of the bowels give good results to him who has knowledge and patience.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by George F. Butler, A. M., M. D.

[Continued from December issue, page 1165.]

DOCTOR CABOT'S address, "A Profession or a Trade?" delivered at the last meeting of the Mississippi Valley Medical Association, to which I referred last month, was as follows:

Medicine has always been regarded as one of the learned professions, and, indeed, this is a distinction of which we are particularly proud. But the tendency of a profession to degenerate into a trade is ever present and is a danger from which more than one learned profession has been unable to escape. If medicine is to avoid the downfall which has overtaken the law, it will be because we are more conscious of the dangers or more alert to check at the beginning undesirable developments. It is for this eason that I make no apology for calling to your attention some tendencies in the development of modern medicine which seem to me fraught with danger.

At the outset of any discussion of the professional or trade aspects of medicine, we shall do well to define our terms.

To me, a profession is an occupation requiring an education in science and which is pursued for its own sake. It must have the advancement of science or the benefit of mankind as its chief end, pecuniary advantage being always a secondary and subordinate consideration.

A trade, on the other hand, is an occupation which is pursued chiefly, though not wholly, for the purpose of acquiring wealth; this wealth, with its ability to advance the interests of the individual, being the chief end.

In estimating the importance of any development in medicine, we can best do so by comparing present conditions with those of the past. The changes which have taken place and the effect which they have produced upon the prevailing type of practitioner stand out clearly, if we look back and picture to ourselves the type which was

looked upon as the highest twenty years ago and compare it with the best that we are producing today.

The "big men" of twenty years ago had, without exception, gone through the school of general practice and had risen from the ranks to eminence by sheer force of character; being largely without assistance of the laboratory, and having fewer instruments of precision than we possess. They had trained their faculties of observation in the hard school of experience and had come to rely far more than we do today upon their individual judgment, unsupported by clearly demonstrable fact. They were more astute judges of men, with a larger comprehension of the strength and weakness of human nature, and a wide sympathy. They were characterized by a certain boldness less seen today, and bred of the necessity of staking their reputations upon much less certain evidence. They seem to have been broader-minded and rather more in touch with affairs other than those of medicine. Their devotion to the ideals of medicine I believe to have been more profound. Upon this latter point we have the direct testimony of a great surgeon in a lecture delivered nineteen years ago this month. Among other things he said:

"Medicine is the noblest of professions and the saddest of trades. As a trade, it certainly is a very sad calling. . . . In all other ordinary business trades, the young man who is entering upon them advertises himself in some way; the doctor may not advertise. . . . He can not sue others very well for his debts . . . because that savors of oppression. It is the taking advantage of other people's misfortune; it is taking advantage of their sickness and their weakness. . . . The doctor, you must bear in mind, has to carry the burdens of all sick people; he is their friend, adviser and counselor, and if you look at it from a plain business point of view the fact must remain that this must be counted as a somewhat discouraging feature. . . . Ours is the noblest profession

that exists. It is above all the most humane; it can not be otherwise; we seek daily and give our lives to make people happier, to make them better, to alleviate their suffering in every possible way."—(Cheever, Boston Medical and Surgical Journal, December 17 and 24, 1896.)

This fairly expresses the ideals of the best type of practitioner developed under the conditions which existed a generation ago, conditions which developed character, which involved the ability to judge men, to make sound deductions from a study of character and to come to a decis on and act upon it as the result of weighing probabilities, not facts.

Since that time, enormous advance has been made in every field of science as related to medicine. What we may broadly call "the laboratory" covering the fields of chemistry, bacteriology, pathology, and physics, has broadened the scope and increased the accuracy of medical diagnosis. Instead of being required to weigh probabilities, we are today able to assort facts. Judgments of character have given place to assortments of data, and, whereas the practitioner of a generation ago was profoundly influenced in his decisions by his study of the individual, the consultant of today may almost arrive at his opinion without ever seeing the patient. The amount of technical knowledge required of the physician today is enormously greater than was required of his predecessor, and it can not successfully be denied that he is far more likely to arrive at a just appreciation of the facts.

With this advance, however, has gone the necessary division of medicine into specialties, a division which the rapid accumulation of knowledge has rendered inevitable; and this has sounded the death-knell of the general practitioner. His place has been taken, or, rather, is occupied, by the medical group, an aggregation or conglomeration of specialists who, having pooled the results of their investigations, are able with greater accuracy to come to a diagnosis. These groups have developed either around the hospital as a center or around some individual who, finding that medicine was growing away from him, has surrounded himself with assistants and associates equipped with special knowledge.

In its most finished form, the medical group is represented by a hospital, with medical and surgical chiefs, chiefs of special departments, and under each the necessary subordinates;

but this development has been reached only by a comparatively small number. In a less obvious form, however, the principle is very widespread. Almost every internist or surgeon of large practice is, in fact, the head of a group, only it is unorganized and unnecessarily expensive. Each has an aurist, an oculist, an orthopedist, a dentist, a roentgenologist, a chemist, a pathologist, a serologist, who examine his patients and on whose collective opinions his own diagnosis, prognosis, and treatment must rest. Each one of us is a part of some more or less informal group, though the cohesion may be so loose as to more or less obscure the fact. This tendency to grouping is becoming more marked and the groups more formal.

There can be no question as to the efficiency of this method of "group medicine" in arriving at an accurate diagnosis, and there can, I think, be no question of the necessity of such grouping in the successful development of scientific medicine. We may, and do, regret the disappearance of the well-rounded general practitioner, but we must acknowledge the limitations of the human mind and, so, bid him an affectionate farewell. We shall, however, do well to remember that this development carries with it certain serious disadvantages, the effect of which upon the type of practitioner developed may well be profound.

"Group medicine" means diminished personal relation with the patient, less comprehension of character and personality, increasing probability of impersonality in the relation; in a word, the group tends to become a machine. Should this occur, the individual becomes a cog. Furthermore, the development of group medicine, with the increasing subdivision of medicine, has enormously increased its expensiveness. Such groups require vastly more income than did the general practitioner whose place they have taken. It is this increase in the expense of medical practice which has fostered the growth of scandalous advertising, feesplitting and the general exploitation of patients for money.

These are but the evidences of the development of the trade-aspect of medicine, since all of them not only are proper, but necessary in the conduct of any well-organized business. Business ethics require the giving of commissions to those who send trade. Business development requires advertising; business judgment requires that discovery be developed for the benefit of the discoverer.

The increasing impersonality of group medicine makes the acquisition of the business point of view more easy. With the loss of the personal relation, the impropriety of taking advantage of the misfortunes of others slips into the background, while the necessity for maintained income from which to pay salaries becomes increasingly evident. A group must almost of necessity be managed upon a business basis. Salaries, if agreed upon, must be paid, and, whereas the practitioner of former times had to think only of himself and of his family, the responsible head of a group must think of all the subordinate members of that group.

If it be a fact that most medical groups which have reached prominence in this country have been built up by advertising and fee-splitting, it is not so much a wonder that this has occurred as that it has not been absolutely universal. In the transition between individual medicine and group medicine, this problem of income has pressed for solution and has been solved most easily by the adoption of business methods which require advertising and commissions.

We shall do well to look these facts squarely in the face and to decide as promptly as may be whether this development of group medicine is the logical method and, if such be the case, to lend it, not only our support, but our criticism. It must be perfectly evident that the individual who undertakes to combine in his own person all the functions of the members of such a group will inevitably fail, and that the replacement of the general practitioner is already complete for such portions of the country as are thickly populated. We shall do well also to recognize that this development seriously threatens the professional character of medicine and that, unless it be carefully safeguarded, the professional character will be lost.

For my own part, I am entirely convinced that the group must take the place of the individual.

We shall doubtless be tempted to ask whether such a system of medicine tends to develop men of a caliber equal to their fore-fathers; and whether this business organization tends to develop as high a type of practitioner. The answer to these questions is, of course, difficult, for, certainly, it will tend to develop an entirely different type.

More and more the heads of these groups will become experts like any other business experts and likely to hold a similar position in the community. The "big men" in medicine will be more like the big men in business. They will cease to be the guide, counselor and friend of the individual, but may perhaps become the guide, counselor, and friend of the community. Their present position in the community will probably be lost, but they may acquire another, perhaps better suited to modern conditions. Since the development of medicine has made it impossible for them to do justice to their patients without much assistance from others, they must be content with the altered relation; but this change does not require the abandonment of the ideals of a profession and the assumption of the character of a trade. It is wise, however, to appreciate that the scale is narrowly balanced and may readily tip in such a way as to spill its contents from a profession into a trade. If this is to be avoided it must be by a willingness to face the facts and deal with them.

The chief difficulty lies in providing a proper income for the support of these medical groups. At the moment it is being provided by a competition that has many dangerous possibilities. Competition is the essence of growth, but competition may be of more than one kind. Competition in a trade is, grossly speaking, for a money reward; competition in a profession is for scientific achievement. If competition in medicine is to be both for money and scientific achievement, then money may well gain the upper hand. Competition between medical men for money when lives are in the balance is intolerable, and, yet, no one of us can honestly deny that such competition today exists and that it is at the root of most of the worst tendencies against which we have to strive. If medicine is to remain a profession, this competition for money must cease.

Now, if we are to remove from the field of medicine this undesirable kind of competition, then all practitioners of medicine must be paid salaries and the amounts of these salaries must be determined by persons having no personal interest at stake. This means, reduced to its simplest terms, that we have a choice between the taking over of medical practice by the state or the management of medical practice from institutions or hospitals as a center. In either case, salaries must be paid to all, and the temptation to practice medicine for money must be eliminated as a possibility. The choice between state-medicine and hospital-medicine must be determined ultimately by the peculiarities of the civilization concerned.

(To be continued.)

Among the Dooks

TREAT'S "INTERNATIONAL MEDICAL ANNUAL"

The International Medical Annual. A Year-Book of Treatment and Practitioner's Index. Thirty-third Year. New York: E. B. Treat & Co. 1915. Price \$4.00.

If Messrs. Treat and Company existed for no other purpose than to furnish us each year with this excellent summary of the twelve months' achievement and progress in medical science, they would fulfill a function which would amply justify their corporate existence. Of course, it does not tell the whole story of research and experiment—no volume could do that. But it serves out the net practical sublimation of the year's work, cast into ammunition (to use the figure of speech of the day) ready for use by the man at the front.

We are glad to see a larger and larger sprinkling of American sources throughout the book—a feature, by the way, which is not indicated by the list of "contributors" on the title page, who are mostly English. One finds, however, that much of their contributions is derived from American authors and workers. The more modern forms of therapy also find a very generous representation in this volume.

AARON: "DIGESTIVE DISEASES"

Diseases of the Digestive Organs. With Special Reference to Their Diagnosis and Treatment. By Charles D. Aaron, Sc. D., M. D. With 154 engravings, 48 roentgenograms, and 8 colored plates. Philadelphia and London: Lea and Febiger. 1915. Price \$6.00.

The plan of this work follows the physiologic path of the digestive tract, beginning with diseases of the mouth, and taking up, in succession, the pharynx, esophagus, stomach, liver, gall-bladder, bile ducts, pancreas, small intestine, appendix, cecum, colon, sigmoid flexure, rectum, and anus.

The author has attempted to put before the reader, in an orderly, consecutive manner, the diagnosis and treatment of digestive diseases and to make available to him all the modern resources of this branch of medicine. There is an unfortunate tendency nowadays to isolate the consideration of diseases of the digestive organs from the great body of internal medicine, in spite of the fact that a direct connection exists between the functions of the digestive tract and those of other organs.

In this work the author reaffirms the intimate relationships between gastroenterology and all branches of internal medicine. No subject has profited more by modern research than has the diagnosis and treatment of diseases of the digestive organs; and all of this progress and advance finds a representation in the pages of Doctor Aaron's excellent work.

WOODRUFF: "MEDICAL ETHNOLOGY"

Medical Ethnology. By Charles E. Woodruff, A. M., M. D. New York: the Rebman Company, 1915. Price \$2.00.

The author states that the present work was begun as a revision of the first edition of "The Effects of Tropical Light on White Men," but that he found it necessary to change the title to "Medical Ethnology" because he found himself obliged to reckon with so many other factors besides pigmentation which have entered into the discussion of the reasons for the differences between the present races and sub-races of men—for example, the damage to migrants by adverse environmental conditions against which they have no physical defenses.

Woodruff accepts as an axiom the proposition that all the laws which govern the evolution of adaptation of lower animals to environment by elimination of the unfit and selection of the fittest, apply with equal force to men, which, he thinks, fully explains the high death rate of migrants and their eventual extinction or change of type. He appears to us, however, to fall into the common error of assuming that the acceptance of this axiom involves a blind enslavement to it.

While it is doubtless true that all the laws which apply to animals in this respect apply also to men, it may be, and probably is, equally true that there are other laws which apply to men which do not apply to ani-

mals. It seems to us that the author does not give enough consideration to these other laws and factors. Except for this defect, which characterizes many works on ethnology, Doctor Woodruff's book is a masterly presentation of the subject.

MEDICAL RECORD VISITING LIST

The Medical Record Visiting List, or Physician's Diary, for 1916. Newly revised. New York: William Wood & Co., 1915. Price, \$1.25.

We take pleasure in announcing the appearance of the edition for 1916 of this visiting list, which has become a standard of its kind. It contains much valuable information to which the physician may want to refer in a hurry, such as dosage, incompatibles, weights and measures, treatment of poisoning and other emergencies. The book is bound substantially in black leatherette, with flaps, pockets, pencil, and other conveniences. Our readers who have been in the habit of using this visiting list will do well to act upon this reminder and supply themselves with the copy for the coming year.

STEWART: "SURGERY"

A Manual of Surgery, for Students and Physicians. By Francis T. Stewart, M. D. Fourth Edition. With 580 illustrations. Philadelphia: P. Blakiston's Son & Company. 1915. Price \$4.00.

This book is especially designed for the needs of the student, whose crowded hours demand a manual stripped of verbiage and unessentials, and for the general practitioner, who seeks a guide to everyday surgery. Everything, therefore, has been set down concisely and completely, and such suggestions have been made as to diagnosis and treatment as will best aid the physician in his daily practice. In short, the main object of the book is brevity and practicality. For these reasons, historical matter and bibliographical references have been omitted, and emphasis is laid upon those details which the author's experience has taught him to be of the greatest clinical importance.

In the present edition, the sections dealing with instrumental investigation, such as bronchoscopy, proctoscopy, radiography, and so on, have been expanded. Important changes have been made in the articles on transfusion, hemorrhage, spinal puncture, colectomy, hernia, tumors of the hypophysis, and surgery of the lung, liver, spleen, stomach and breast.

New sections have been added on the exclusion of the pylorus, esophagectomy, sporotrichosis, surgery of the hand, and transplantation of fat, fascia, bone and veins.

MIND AND HEALTH SERIES

Human Motives. By James Jackson Putnam, M. D. Boston: Little, Brown & Co. 1915. Price \$1.00.

The Meaning of Dreams. By Isador H. Coriat, M. D. Boston: Little Brown & Co. Price \$1.00.

Sleep and Sleeplessness. By H. Addington Bruce, A. M. Boston: Little, Brown & Co. 1915. Price \$1.00.

These three volumes constitute a part of an important and novel series of handbooks, to be written by eminent specialists and edited by H. Addington Bruce, and to be known as the Mind and Health Series. It is well recognized that in recent years there has been developed an entirely new department of the healing art, the outgrowth of the discovery of the intimate and subtle inter-relations between mental and bodily states in the causation and cure of disease. It is the aim of this series of books to present the facts pertaining to this new department, and the theories to which they give rise, in a form sufficiently non-technical and at the same time sufficiently detailed to insure their general understanding.

Doctor Putnam's book is a study of the psychology and philosophy of human conduct, based largely on the author's use of the Freudian psyche-analytic method of mental diagnosis. Besides being of great value for medical purposes, this method, as the author shows, has thrown a flood of light upon human behavior in general.

In the second volume Doctor Coriat discusses the psychology and psychopathy of dreams, with particular reference to their value in the treatment of nervous disorders, reinforcing his discussion with many concrete instances from his clinical experience as a neurologist and psycho-pathologist.

The third volume is from the pen of H. Addington Bruce himself. The author presents the contrasting theories of sleep, with emphasis upon some recent experimental studies which are of great practical, as well as theoretical, importance. The state of the mind in sleep is carefully examined from every standpoint. Finally, the ever-urgent problem of insomnia is taken up, its manifold causes reviewed, and the most approved modern methods of treating it plainly stated.

Five more volumes of this interesting and instructive series are now in course of prepa-

CHICAGO CLINICS

The Medical Clinics of Chicago. July, 1915. Volume I, No. 1. Published Bi-Montly by W. B. Saunders Company, Philadelphia and London. \$8.00 per year.

This is the first of a series, undertaken by W. B. Saunders Company, of periodical reports of medical clinics by the various distinguished clinicians of Chicago, similar in character and aim to the reports which the same publishers have been issuing for the last year or two of Doctor Murphy's surgical clinics. They hope in this way to present to the profession in each number a series of cases representing all branches of internal medicine which shall be word-photographs of the actual, up-to-date management of each case in its important phases.

The first number speaks for itself. It contains a most representative collection of case reports, including at least one, and in most instances more than one, from the clinics of Doctors Mix, Spencer Williamson, Abt, Preble, Goodkind, Tice, Hamburger and Hamill, respectively. In the second number, in addition to the above clinicians, Dr. William Allen Pusey is represented, with a contribution on x-ray and epithelioma. In their announcement, the publishers state that the publication of this series has been undertaken in response to a demand by the physicians of the country. Whether this be true or not, it is certain that the series will fill a real place in the needs of physicians.

SCUDDER: "FRACTURES"

The Treatment of Fractures. With Notes Upon a Few Common Dislocations. By Charles Locke Scudder, M. D. Eighth edition, revised, with 1057 illustrations. Philadelphia and London: W. B. Saunders Company. 1915. Price \$6.00.

Whenever one thinks of fractures, one thinks irresistibly of Scudder and his book, in the same way, and with the same attitude of mind, that one thinks of Stevens in connection with the steam engine. So classical, indeed, has this work become, that the reviewer finds it difficult to say anything of pertinence concerning it which has not already been said. It is some years since the last edition appeared. During that period the author has evidently kept well in touch with modifications of treatment, and such as have stood the test of experience he has incorporated in this new edition. He does not believe-and we agree with him heartily—that a permanent work should contain suggestions which have not been thoroughly tried out and found to be of permanent practical value.

In the author's judgment, the greatest recent advance in the treatment of fractures of bone is the application of the principle of autogenous bone-grafts in cases of delayed union and of non-union. This feature. therefore, finds considerable representation in this new edition of his book. Many new illustrations have been added. New material has been added upon fractures of the jaw, the acetabulum, and the greater tuberosity of the humerus, and upon separation of the lower epiphysis of the femur.

MALLORY AND WRIGHT: "PATHOLOGI-CAL TECHNIQUE"

Pathological Technique. A Practical Manual for Workers in Pathological Histology and Bacteriology. By Frank Burr Mallory, A. M., M. D., and James Homer Wright, A. M., M. D., S. D. Sixth edition, revised and enlarged. Philadelphia and London: W. B. Saunders Company. 1915. Price \$3.00.

As the authors pertinently remark, in their preface, every autopsy presents for solution a problem which may be simple or complex. The known quantities are certain clinical symptoms and physical signs; the unknown quantities are the gross and microscopic lesions which may or may not have given rise to clinical symptoms or signs, the etiology of these lesions, and the order of their sequence. The solution of the problem often requires the highest skill in bacteriological and histological technic, but therein lies the fascination of pathological work.

It is to the systematic outworking of such problems that this book addresses itself, or, rather, instructs the attending pathologist how to address himself. The methods employed are presented in consecutive form, so as to avoid unnecessary repetition. The present edition contains a number of additions, partly of standard methods which have not been incorporated earlier because they seemed of less value to the pathologist than to the histologist, and partly of new methods which have appeared since the former edition was published. The book will undoubtedly meet the needs of the practitioner who has to do more or less pathological work.

Ondensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6156.—"Potassium Permanganate and Amenorrhea." B., Kansas, wishes to know whether potassium permanganate will cause a woman to menstruate. He is treating a young healthy girl of seventeen, who first menstruated when fifteen years old, but for the last six months has not done so. She is the picture of health, but has heard that if she does not menstruate she will "go into consumption." Therefore she is insistent that something shall be done at once.

Potassium permanganate has been recommended for simple idiopathic amenorrhea. It is, undoubtedly, of some service if taken for two weeks before the date of expected menstruation. Of late, dioxide of manganese has to a great extent supplanted potassium permanganate, the dose of the former being 1 to 3 grains.

Potassium permanganate is easily decomposed; moreover, brought into contact with organic matter, it may cause an explosion. It is employed as an antiseptic and oxidizing agent, the peculiar property of the remedy being its readiness to part with oxygen.

In concentrated solutions, or in substance, it is a mild escharotic. Weak solutions (1:2000) are employed in purulent ophthalmia. In the strength of from 1 to 5 grains to the ounce, it constitutes a useful application for foul ulcers, cancer of the uterus, vagina, and so on. Solutions of varying strengths are also employed in the treatment of gonorrhea, leucorhea, sore throat, ozena, and the like. It is also injected subcutaneously in the region of snake bites.

We should hesitate to give the drug, save in very small doses, for more than a few days, say, 1-64 grain every three or four hours, four to six days before the expected period.

Bear in mind that the drug can only prove useful in typical anemic amenorrhea. During the intramenstrual period, iron arsenate or, better still, the triple arsenates with nuclein should be administered.

Impress upon your patient the fact that failure to menstruate cannot possibly produce or cause consumption. Reversely, though, consumptive females may cease to menstruate or never begin to menstruate at all. Considering that your patient is the "picture of health," there is no reason whatever for her fear of an oncoming phthisis. Make a careful examination of the pelvic organs.

Do not forget the possibility of retention of the monthly discharge. Is there any pain or distress of any kind at the monthly period? How often did the menses appear?

If the vaginal or cervical canals are not occluded and there is no flexion-ante or retro-of the uterus, with retention of menstrual fluid, it is more than likely that a course of the triple arsenates, or iron and manganese with caulophylloid, gr. 1-6, and viburnoid, gr. 1-6, three times daily for a week or ten days prior to the period on which the menses should appear, will prove effective. Occasionally this writer gives quinine sulphate, gr. 1, every four hours during the last twentyfour. On retiring at night, the patient should take a hot foot-bath, keeping her feet and legs in a full pail of hot water for at least fifteen minutes. The limbs and the pail should be covered with a thick blanket and heat be maintained by the addition from time to time of fresh hot water.

QUERY 6157.—"Intestinal Kink Causing Coprostasis." A. F., Michigan, presents for consideration the case of a patient, a farmer 63 years of age, whose former weight was 185 pounds, but now is only 125 pounds. For the past three years, this man has been in the hands of all kinds of doctors, besides regular quacks, osteopaths, magnetic healers, and so on, but has steadily been slipping downward, until now he is confined to his room and bed most of the time. He has just come under our correspondent's care, and the latter is anxious for our assistance.

For years this man had spells of severe pain in the stomach and bowels, and then from one to three morphine hypodermics have been necessary to give relief; recovery, however, was always perfect and no appreciable harm was done. Three years ago he began to have severe constipation, with "bleeding piles." He began to go down fast and commenced changing doctors, more particularly patronizing quacks of various kinds. His hemorrhoids do not bleed any now, but the colon will fill up for two or three weeks, then begins to empty, and enormous quantities of feces will be voided during two or three days. When the colon is finally empty, he will begin to pass frequently (every one or two hours, day and night) mucus of a most offensive nature. He suffers from pain and soreness all over the bowels, but this wears off as the bowel begins to empty, with the exception of a place in lower left flank. He is nervous and does not sleep, and is now taking some three or four codeine tablets (1-4 grain each) during the twenty-four hours.

This fecal impaction has been going on for three years. Appetite is good. Has had cystitis, but has that in control. When the colon gets packed, he can only just drag his legs around, and he suffers pain in hips, knees, and ankles (has been treated a good deal for rheumatism), but as soon as the colon is empty the pains all cease in the legs and he can use them properly. This the histofy.

We should be inclined to advise exploratory incision. Either an intestinal kink or an intraabdominal growth obstructing the lumen of the gut exists. However, before resorting to the knife, you might try high colonic flushing, commencing with half a pint of kerosene (patient in knee-chest position). The kerosene should be thrown into the transverse colon, through a rectal tube, followed fifteen or twenty minutes later by hot soapsuds. Be sure that this oil enema is completely emptied out again.

It is just possible, of course, that a tunneled enterolith exists (most frequently these are found in the region of the hepatic flexure), the more fluid feces passing through and remaining in the bowel, because of its atonic condition, until by some means or another it is evacuated. The cause of the whole trouble, however, remains behind and exactly the same conditions will recur. Kerosene will break up such a fecal mass in the majority of cases.

When the bowel is emptied, administer highly nutritious foods containing little waste, and every three hours give physostigmine, berberine, and juglandoid in full dosage. This combination is a most efficacious peristaltic stimulant and intestinal tonic, indicated in colonic torpor and general intestinal insufficiency.

Morning and night give 1 or 2 ounces of refined liquid petrolatum (socalled Russian mineral oil) or, better still, the same quantity of petrochondrin, a combination of an acid-free and alkali-free petrolatum and emulsion of chondrus crispus (Iceland moss).

Massage the abdomen every day, following the course of the colon, or, better still, apply the faradic or sinusoidal current.

If these steps do not prove curative, operation is distinctly indicated, provided, of course, the general physical condition warrants such procedure.

QUERY 6158.—"Hypernephroma." W. C. B., Nebraska, forwards a section of a tumor of the kidney for examination and states: "This represents a case of 'Christian Science' treatment of a tumor for about five years; and, so far as I can discover, this growth had been in existence for a longer period than that."

You have to deal with a hypernephroma. Such growths, as you are aware, arise from a portion of the suprarenal body which during embryonic life has remained under the capsule of the kidney or even of the medullary substance. The average length of life of such a subject, is about fifty years. The evolution of such tumors is gradual, and it is very characteristic of this type of neoplasms that is does not give rise to any symptom before the fiftieth year of life, except for occasional attacks of dragging pains and sensations of pressure.

In the average case, hematuria occurs about five or six years after the first pain is experienced. In 80 percent of all cases, pain is present at some stage and may vary from dull backache to severe renal colic. It is interesting to note that cases have been described in which twenty years have elapsed between the first evidence of pain and discovery of the growth.

QUERY 6159.—"Syphilitic Sore Throat." A. G. S., Illinois, has "a patient with (twenty-year) syphilitic sore throat; is very hoarse, can hardly talk." He asks: "Shall I give him bacterins, or drugs, or both?"

Tertiary syphilis of the larynx frequently proves extremely rebellious to treatment, though in cases treated reasonably early the prognosis is fairly favorable. Recovery of a clear voice, however, can never be promised. "In the more advanced cases," Thomson says "the possibilities of rest, care, prolonged treatment, tracheotomy or operations for stenosis should be kept in mind."

We have not a clear enough idea of local and general conditions to enable us to prescribe very intelligently. Furthermore, are we to understand that the patient has suffered from this condition for twenty years or that he is twenty years of age? At all events, the voice should always be rested. Besides, the patient must be placed upon a light—preferably milk—diet. Tobacco and alcoholic beverages are prohibited.

Constitutionally, a mixed treatment should be instituted, though in the absence of urgent symptoms speedy relief can be secured by the use of the iodides. The following may prove advantageous: Mercurous iodide, gr. 1-12; stillingoid, gr. 1-3; strychnine arsenate, gr. 1-64; iron arsenate, gr. 1-32; quinine arsenate, gr. 1-32; nuclein solution, m. 5; this alternated with calx iodata in full doses. Or, give potassium iodide for one week, and calcidin the next, week and week about.

Local treatment sometimes is of secondary importance, while in other cases this must be prompt and energetic. Ulcerating surfaces must be sprayed or wiped with a solution of peroxide of hydrogen and dusted with iodoform, europhen or chinosol. This writer applies euarol with an oil-atomizer, and controls pain and dysphagia by means of insufflations of orthoform. It may be necessary to remove exuberant granulations with the curette or by applying a solution of nitrate of silver (15 grains to the dram), or, else a 25-percent solution of ichthyol. Moderate edema may be relieved by the sucking of ice. In severer forms, tracheotomy may become necessary.

The treatment of syphilis of the trachea is very similar, although more energetic procedure is essential. Mercurial impression should be secured by the inunction or intramuscular injections of gray oil or calomel. Fumes of sublimed calomel may be inhaled. The use of intravenous injections of salvarsan also must be considered.

QUERY 6160.—"Sudden Enlargement of Thyroid Gland." E. M. C., Tennessee, asks advice in the case of an thindrich woman, 28 years of age, heretofore in good health, who consulted him regarding her greatly enlarged neck, which she thought to be goiter. After close questioning, he decided that it was not goiter. He writes: "The young

woman has done lots of papering overhead lately, and I think that is what caused the thyroid gland to enlarge. It looks very much like goiter, but the enlargement occurred within three or four days. Her neck has never before looked enlarged at all, and I have seen her quite often. I put her on echinacea and chromium sulphate, 5 grains every four hours, and am applying iodine over the gland area."

With our very limited conception of regional and general conditions, we are unable to venture a definite opinion. It is hardly likely, however, that the position assumed in papering ceilings would cause enlargement of the thyroid gland. Do not forget, however, that many wallpapers contain arsenic and that absorption of this poison in any quantity, especially through the skin or mucosa, may cause such enlargement.

Remember, also, that in certain individuals the thyroid gland becomes temporarily enlarged without any recognizable cause, or it may do so at the menstrual period or in conditions causing congestion of the pelvic viscera. In very many instances, enlargement of the thyroid gland has been observed during pregnancy, the gland returning to its normal size shortly after delivery. Then, again, the enlargement of the gland is concurrent with the development of the mamma and persists during lactation. Unfortunately, our knowledge of the thyroid gland and its functions is still but very meagre.

We doubt the applicability of echinacea, under the circumstances, and believe you will get better results from irisoid and phytolaccoid, in alternation with calcidin. Inunctions of potassium-iodide ointment will prove more effective than the tincture of iodine locally.

If you will submit a report on the examination of this patient's urine and give us more complete clinical data, we may be in a position to serve you more intelligently.

"Her present symptoms are: Very marked dyspnea; cough, which brings up frothy sputum mixed with blood, sometimes pure blood. She has no valvular lesion of the heart; her pulse rate is 96 to 100; blood pressure registers 145 (systolic). There is anasarca of the abdomen, legs, arms, and

face. The urine: Amount, in twenty-four hours, 15 to 16 ounces; specific gravity, 1.025; large amount of urates; indican present; albumin, about 3 to 4 percent; hyaline and granular casts, and blood-cells. Diagnosis: Chronic parenchymatous nephritis. The amount of blood coughed up is, in the correspondent's opinion, "caused by passive congestion due to pressure," and he asks if emetine in 1-2-grain doses hypodermically would be of benefit.

We regret that you did not have the sputum examined and give a clearer idea of the pulmonary conditions, as revealed by auscultation and percussion. Doubtless, there is more or less hepatic involvement, with obstruction of the portal circulation, and, of course, the kidneys are seriously involved.

We should be inclined to place the patient upon a milk (or milk and cereal) diet. Also, give blue mass and soda, gr. 1-2, with podophyllin, gr. 1-6, half-hourly for four doses, every third night; salithia, the next morning. Apocynoid and scillitin might be given, in fairly full doses, every three hours, on the days when blue mass and soda is not administered—just sufficient to secure free watery stools. Such medication should be continued for a week, then suspended for two days. It is more than probable that emetine hydrochloride, administered hypodermically, would exert a beneficial effect on the hemoptysis. The prognosis of this case is, however, far from favorable.

This writer has had good results, in these cases, from the administration of hamameloid and collinsonoid, 1-6 grain of each, three or four times daily, taken with a mouthful of water. The patient may also, with advantage, inhale eucalyptolized steam.

QUERY 6162.—"The Causes of Edema." W. S. W., Georgia, writes that he "now and then has a patient who has swollen legs, and sometimes swollen hands also—not 'dropsy', but just swelled up; but sometimes may have backache, and other pain." He asks what treatment he might try for this condition; and, also, if this is not often an expression of autotoxemia; saying that "often these patients have urinary hyperacidity and albumin, but that some have not. The bowels are somewhat sluggish in the case of most of them."

It is decidedly difficult to answer your question relative to the proper treatment of localized edema; for, in order to institute proper therapeutic procedure, one must have a somewhat definite idea of the cause of the trouble. "Dropsy" is a general term, and indicates an accumulation of watery fluid in the serous cavities or a general diffusion of such fluid through the tissues of the body. "Edema" designates the effusion of watery fluid into the tissue of a circumscribed area. "Anasarca" means a generalized edema.

Edema is usually due to a disturbance of the relation between the amount of fluid which transudes from the capillaries and that absorbed and carried away by the lymphatics. The causes of edema may be: (1) Venous obstruction; (2) toxemic or hydremic conditions of the blood; (3) effect of inflammation upon the neighboring circulation; (4) vasomotor or other causes belonging to the nervous system; (5) lymphatic obstruction. Besides, there is a form termed idiopathic edema, the nature of which is not yet understood.

Bear in mind that edema not due to a discoverable morbid condition is far from infre-

quent.

Circumscribed edematous swellings are observed over the precordial space in pericarditis; the affected side in empyema; over the mastoid process, in inflammation of the mastoid cells; over the parotid gland in mumps; over the region of the appendix, sometimes, in appendicitis; the posterior lumbar region, in perinephritic abscess; and it may be associated with a subcutaneous in-

fection in any part of the body.

Edema of the upper half of the body is observed in the early stages of renal dropsy; of the arms, head, and neck in thoracic aneurism; hydrothorax in mediastinal tumors pressing on the vena cava above the entrance of the azygos veins; when the point of pressure is below the azygos veins, the arms, thorax, head, and neck become involved. Cardiac edema is at first localized and makes its appearance primarily in the feet, whence it may extend upward. Local edema may be caused by thrombosis of or pressure upon a venous trunk. Angioneurotic edema is a singular disease in which edematous swellings appear or disappear at frequent intervals, in the face or the extremities. It is not rarely observed.

Thus, it is evident that there can be no set treatment for "dropsy." However, correction of any underlying disorder of the body-chemistry and maintenance of thorough elimination are invariably indicated.

Calcium carbonate, with lithia, would certainly prove useful where hyperacidity is known to exist, though more marked results would probably follow the administration of some such course as this: Sodium sulphocarbolate, grs. 2 1-2; sodium sulphate, grs. 5; sodium bicarbonate, grs. 20; colchicine, gr. 1-500; juglandoid, gr. 1-6; xanthoxyloid, gr. 1-6; besides sodium chloride and aromatics, a sufficient quantity. Such a dose to be taken three times a day, preferably an hour before meals.

In this connection, let us suggest that you read carefully the chapters on dropsy, edema, and anasarca, in Butler's "Diagnostics of Internal Medicine."

OUERY 6163.—"Emetine and Ouinine in Hemoglobinuria." R. B. K., Tennessee, wishes to know if pituitrin and emetine hydrochloride are indicated or contraindicated in malarial hemoglobinuria? He would like to learn from physicians who have had to treat malarial-fever patients in our southern regions. Also, "for the sake of argument," he asks the same relative to quinine. "This latter question," he remarks, "may seem foolish to some, but I have met many doctors who do not use quinine and, yet, have fine success."

To the best of our knowledge, neither pituitrin nor emetine thus far have been used in malarial hemoglobinuria, but, herewith we present the subject for general consideration by the readers of CLINICAL MED-

As to the subject itself, we must bear in mind that there are three theories regarding the etiology of hemoglobinuric fever, namely: (1) That it is the result, directly or indirectly, of malarial infection; (2) that quinine is the cause of it; and (3) that it is a definite disease, caused by a specific parasite.

We are inclined to the last view, for several reasons. The lesions in hemoglobinuric fever are confined to the kidneys, liver, and blood. In the viscera, acute congestion and areas of necrosis are found, evidencing the action of a powerful toxin. The blood shows a decrease in the number of red cells, and a marked increase in the large mononuclear variety. The urine not only contains hemoglobin, but also the other usual evidences of acute tubular nephritis.

Manifestly, views so divergent regarding the etiology of the disease, as above indicated, result in widely varying treatment.

Many southern practitioners, believing firmly in the malarial nature of the condition, strongly advocate the use of large doses of quinine; indeed, not a few clinicians regard this drug as a specific, although in the vast majority of instances no real proof. exists that it is of any benefit whatever. It most certainly is not if the plasmodium malariæ can not be demonstrated in the peripheral blood.

On the other hand, practitioners equally well informed warn strongly against the administration of quinine, in this disease, in any form. Probably the real indication for its use in hemoglobinuria, as elsewhere, is, the established presence in the blood of malarial plasmodia. Should no malarial complication exist, it is doubtful if quinine should be given, as there is no proof, under the circumstances, that it is of benefit. Large doses, indeed, are quite likely to do material damage. Statistics tend to prove that the mortality is greater when quinine is being prescribed indiscriminately.

It must be borne in mind that there is a difference between true hemoglobinuric fever and hemoglobinuria following the administration of quinine in malarial infections. There is no question that in certain individuals both quinine and the malarial plasmodium may cause hemoglobinuria, but these attacks are not true blackwater-fever and differ greatly from the clinical picture of that

disease.

Hare, in "Modern Treatment," presents the following rules as governing the administration of quinine in hemoglobinuric fever:

"1. Quinine should be administered to all patients suffering from hemoglobinuric fever if malarial plasmodia are demonstrated to be present. The dose should be sufficient to cure the malarial infection.

"2. The drug should not be given to patients in whom the malarial plasmodia can

not be demonstrated.

"3. If hemoglobinuric fever occurs during the administration of quinine for a previous malarial infection and the plasmodia can still be demonstrated in the blood, the drug should be continued until the plasmodia disappear.

"4. If the disease develops during the administration of quinine and no plasmodia can be demonstrated, the drug should be

discontinued.

"5. As there is no proof that quinine has the least effect upon hemoglobinuric fever and is distinctly harmful if given in uncomplicated cases, it follows that this drug should not be used in the treatment of this disease, except when a malarial complication can be proved to exist.

"6. In patients giving a history of hemoglobinuria following the administration of quinine, the drug should not be given; some substitute for it being used if a malarial infection be present."

The use of calcium chloride has lately been strongly advocated.

In this connection, let us call your attention to a very interesting phase of the subject presented in Query No. 5882, which appeared in the February, 1913, issue of CLINICAL MEDICINE.

The correspondent in that case had had under treatment a very bad case of hemoglobinuria and he expressed the belief that one of the predisposing factors is acid intoxication. In our reply, we pointed out that most individuals suffering from malaria may receive comparatively large doses of calomel or of calomel and podophyllin, followed by a laxative saline draught; and that in a large number of cases the sulphocarbolates are given freely. Evidently, any acidemia present will, in that way, be corrected. We also pointed out that many observers in southern states agree that quinine in full doses is liable to produce hemoglobinuria; that, quinine being a protoplasmic poison, always renders hemoglobin unstable and destroys the red cells. If this action is added to the destruction wrought by the plasmodium malariæ, it obviously would cause the escape of hemoglobin into the urine.

It must also be remembered that many times hemoglobinuria is the diagnosis given when, in fact, the condition we have to deal with is hematuria.

In hemoglobinuria occurring in a malarial patient, it is probable that the plasmodia malariæ act directly upon the blood-cells in the parenchyma or renal tubules, such hemocytolysis causing hemoglobinuria. This question has never been definitely settled, but we do know that, in many cases of socalled hemoglobinuria, blood in large quantities has been discovered; that, in fact, hematuria existed.

Extremely high temperature is just as likely to produce hemoglobinuria as does the

ingestion of large quantities of quinine, both agencies breaking up the close adhesion of the hemoglobin to the blood-cells and causing its liberation.

In blackwater-fever, so called, the causative agent undoubtedly is the toxins that exert a deleterious action upon the erythrocytes. This action may be increased if quinine be taken; or, the drug itself, given for therapeutic effect, may produce hemoglobinuria.

It is probable that in certain toxemias the combination of the hemoglobin with the stroma of the blood-disks has become looser than normal, and, so, causes that ordinarily would be harmless will then prove sufficient to produce separation of the hemoglobin. In this way, we could readily account for "paroxysmal hemoglobinuria," so called, which manifests itself after the initial phenomena of the chill and the quick rise of the temperature to 103 or 104 degrees. The urine voided after such a chill often is smoky or brownish-red in color and contains hemoglobin in large quantities. This condition may persist for some time, much depending upon the intensity of the toxemia-that is, the disintegration of the blood-corpuscles.

The whole subject is of intense interest, and we hope that the presentation of this question will lead to an expression of opinion from those who have had extended experience in the treatment of hemoglobinuria.

LATER.—In a letter just received from one of the most distinguished authorities on malaria in this country, who has been giving emetine a careful clinical trial in malarial hematuria, he says: "So far as I know, there are no published accounts of the treatment of malarial hematuria with emetine, but we have tried it with marked success in this form of hematuria and hemoglobinuria, as well as in other forms." The testimony of this gentleman will undoubtedly lead to a general employment of emetine in this condition.

